4.11 CULTURAL RESOURCES

4.11.1 Significance Criteria

An adverse impact on cultural resources would be considered significant and would require mitigation if Project construction or operation would result in an unresolvable adverse effect on the characteristics that contribute to the eligibility of a historic or prehistoric property for listing on the NRHP or the CRHR. Adverse effects may include, but are not limited to, the following:

- physical destruction of or damage to all or part of the property;
- change in the character of the property's use or of physical features within a property's setting that contribute to its historic significance (e.g., by isolating the property from its setting); and
- introduction of visual, atmospheric, or audible elements that diminish the integrity of the property's significant historic features.

4.11.2 Regulatory Requirements

Federal

The FERC is responsible for complying with section 106 of the NHPA, which requires Federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) an opportunity to comment. The procedures for complying with section 106 are outlined in the ACHP's regulations (Title 36 CFR Part 800). The effects of the Project on properties of traditional religious and cultural importance to Native Americans must also be considered in accordance with section 101 (d)(6) of the NHPA and the American Indian Religious Freedom Act. North Baja, as a non-Federal party, is assisting the FERC in meeting its obligations under section 106 and the implementing regulations in Title 36 CFR Part 800. In addition, the BLM must consider Native American religious and cultural concerns for the portion of the Project crossing Federal lands in accordance with the Archaeological Resource Protection Act, the Native American Graves Protection and Repatriation Act, and Sacred Sites Executive Order 13007.

As the lead Federal agency, the FERC is responsible for determining NRHP eligibility and Project effects in consultation with the Arizona and California State Historic Preservation Offices (SHPOs); the BLM; the BOR; the FWS, Cibola NWR; and Native American tribes, as applicable. If, after completing review, the consulting parties agree that cultural resources found during surveys are ineligible for the NRHP, no further consideration of these resources would be required.

In evaluating cultural resources, several criteria are considered. First, significant cultural resources (as defined for Federal undertakings) include those prehistoric and historic sites, districts, buildings, structures, and objects, as well as properties with traditional religious or cultural importance to Native Americans or other groups, that are listed, or are eligible for listing, on the NRHP (historic properties) according to the criteria outlined in Title 36 CFR Part 60.4. Second, cultural resources that do not meet the NRHP criteria but may qualify as a unique characteristic of an area are considered under NEPA.

CEQA

The CSLC is responsible for complying with all provisions of the CEQA covering cultural resources, including the CEQA sections 21083.2 and 21084.1, and section 15064.5 of the Guidelines for Implementing the CEQA. Cultural resources include prehistoric and historic-period archaeological sites,

districts, and objects; standing historic structures, buildings, districts, and objects; and locations of important historic events or sites of traditional/cultural importance. The State CEQA Guidelines section 15064.5 indicates a project may have a significant environmental effect if it causes "substantial adverse change" in the significance of an historic resource as defined in section 15064.5(a)(1) through (a)(4). Under the CEQA, the CSLC is also required to take into account the effect on properties eligible for listing on the CRHR or that meet the definition of a unique archaeological resource in the CEQA section 21083.2.

Under the CEQA, archaeological resources are sometimes treated differently than "historical resources." Thus, it is important to first determine whether certain archaeological sites are "historical resources" for purposes of the CEQA. An archaeological resource is considered an historic resource if it is listed, or determined eligible for listing, on the CRHR, included in a local register of historical resources, or identified as significant in an historical resource survey. For archaeological resources that are not "historical resources," it must then be determined if they are "unique" archaeological resources according to Public Resources Code 21083.2 (g). The distinction may be important because mitigation measures sometimes differ for archaeological and historical resources.

4.11.3 Cultural Resources Assessment

North Baja contacted the Arizona and California SHPOs regarding the proposed Project and the applicability of previous surveys conducted for the A-Line. On March 20, 2006, the Arizona SHPO concurred that the current area of potential effect and previous survey efforts conducted for the A-Line are adequate for the proposed Project. The California SHPO indicated that the guidelines regarding methods for identifying potential subsurface sites have changed since the A-Line was constructed. The SHPO suggested North Baja use the data from the A-Line data recovery and construction monitoring to address the potential for buried sites, or alternatively to develop new field methods regarding such sites. North Baja addressed these comments in its Evaluation Plan.

As part of its application, North Baja provided the FERC with its Overview and Survey Report, and its Unanticipated Discovery Plan (see Section 4.11.4). The report provided the results of the previous A-Line survey and the results of the current surveys of the IID Lateral and the remaining ancillary areas associated with the proposed Project. The report was also provided to the CSLC; the BLM; the BOR; the FWS, Cibola NWR; and the California SHPO. To date, comments have been received from the BLM, the BOR, and the California SHPO.

North Baja subsequently provided the FERC and the CSLC with Addendum Reports 2 and 3. Addendum Report 2 documents the results of surveys of the Arrowhead Alternative (see Section 3.2.5). Addendum Report 3 documents the results of a records search for the Corridor L Alternative (see Section 3.2.3.2). North Baja provided Addendum Report 2 to the California SHPO but did not provide the report to the BLM or the BOR because the report is not applicable to Federal lands. Addendum Report 3 has been provided to the California SHPO and the BLM and the BLM has provided comments. It is not applicable to the BOR.

North Baja provided its Evaluation Plan to the FERC; the CSLC; the BLM; the BOR; the FWS, Cibola NWR; and the California SHPO. The BLM has provided comments on the Evaluation Plan. The California SHPO and the FWS have indicated that they will not be commenting. Following completion of its evaluations, North Baja provided its draft Evaluation Report to the FERC; the CSLC; the BLM; the BOR; the FWS, Cibola NWR; and certain Native American tribes (see Section 4.11.5). The BLM provided comments and the FWS has indicated that it will not be commenting. North Baja subsequently provided its revised Evaluation Report to the California SHPO.

North Baja provided its draft Historic Properties Treatment Plan to the FERC; the CSLC; the BLM; the BOR; the FWS, Cibola NWR; certain Native American tribes (see Section 4.11.5); and the Arizona SHPO. North Baja received comments on the draft Historic Properties Treatment Plan from the BLM; the BOR; the FWS, Cibola NWR; and the Quechan Indian Tribe and provided its revised Historic Properties Treatment Plan to the FERC and the California SHPO. To date, no comments have been received on the revised Historic Properties Treatment Plan from the California SHPO.

B-Line

North Baja surveyed a 220-foot-wide corridor in 2000 and 2001 for the construction of the A-Line, which also covers the construction work area for the proposed B-Line. No cultural resources were identified in Arizona. Ninety cultural resources were identified along the B-Line route in California. Of these, 25 are historic-period sites (including 1 railroad, 3 transmission lines, 15 canals and other irrigation features [including the All-American Canal], debris scatters, and the townsite of Ogilby), 53 are prehistoric sites (including lithic and ceramic scatters, trails, rock features, milling, rock art, geoglyphs, and cleared circles), and 12 sites include both prehistoric and historic-period components. Subsequent to its initial surveys, North Baja completed evaluations at 12 sites to determine their eligibility for listing on the NRHP and the CRHR. Based on the initial surveys and evaluations, six cultural resources are recommended as not eligible for listing on the NRHP and the CRHR and no further work is recommended. Thirty-four cultural resources have not been evaluated to determine eligibility and 50 sites are recommended as eligible for listing on the NRHP and the CRHR. Of these, two NRHP-eligible cultural resources (Site CA-IMP-7911/H and the All-American Canal) were specifically identified by the BOR as important cultural resources. North Baja currently plans to mitigate impacts on Site CA-IMP-7911/H by completing data recovery and monitoring the site during construction. North Baja would avoid impacts on the All-American Canal by use of the HDD crossing method. In addition, the BOR identified several cultural resources that individually may not be eligible for the NRHP, but collectively contribute to an archaeological district being proposed by the BOR as part of a separate project that partially overlaps the proposed Project. Impacts on the other canals and irrigation features would be mitigated by North Baja's proposal to monitor construction activities. North Baja would mitigate impacts on the remaining unevaluated and eligible sites by the use of avoidance measures (including installation of exclusion fencing), construction monitors, data recovery, and/or narrowing of the construction right-of-way. These methods are discussed in North Baja's Historic Properties Treatment Plan.

Arrowhead Extension

North Baja surveyed a 92- to 100-foot-wide corridor along the Arrowhead Extension route on Arrowhead Boulevard. Between MPs 0.0 and 1.0, the survey corridor was 92 feet centered over the paved road, which included the 60-foot-wide construction right-of-way and 16 feet on each side. A 100-foot-wide corridor adjacent to and east of the road pavement was surveyed for the portion of the pipeline route between MPs 1.0 and 1.5. A 100-foot-wide corridor adjacent to and west of the road pavement was surveyed for the portion of the pipeline route between MPs 1.5 and 2.0. The aboveground facility sites and temporary extra workspaces associated with the Arrowhead Extension were also surveyed.

North Baja's surveys identified six historic cultural resources, one of which (the C-05 Canal) was previously recorded. The remaining five cultural resources consist of two wood pole utility lines and three unnamed canals. All six cultural resources identified are unevaluated for eligibility for listing on the NRHP and the CRHR. The wood pole utility lines would not be affected by construction. The Arrowhead Extension would cross the C-05 Canal and two of the unnamed canals. The unnamed canals are private ditches that are not part of the PVID irrigation system. North Baja would cross the two unnamed canals using the open-cut method and would restore the canals to their previous condition after construction. North Baja would avoid impacts on the C-05 Canal by use of the bore crossing method.

IID Lateral

North Baja surveyed a 100- to 200-foot-wide corridor along about 43.0 miles of the proposed IID Lateral route. The remainder of the proposed route was not surveyed due to denied access. Between MPs 0.0 and 8.4, North Baja surveyed a 200-foot-wide corridor centered on the proposed centerline. From MP 8.4 to the end of the route, North Baja surveyed a 100-foot-wide corridor adjacent to the pavement of Evan Hewes Highway. North Baja has indicated it would complete surveys along the remaining portion of the IID Lateral route when landowner permission is obtained.

North Baja's surveys identified 98 cultural resources, 8 of which were previously recorded. These included 73 canals/drains (including the All-American Canal), 14 transmission/telephone lines or poles, 2 historic-period sites, 4 prehistoric sites (including ceramic and lithic scatters), 2 roads, 1 railroad, and 2 isolated finds. Subsequent to its initial surveys, North Baja completed evaluations at five sites to determine their eligibility for listing on the NRHP and the CRHR. Based on the initial surveys and evaluations, six cultural resources are recommended as not eligible for listing on the NRHP and the CRHR and no further work is recommended. Four cultural resources (the All-American Canal and Sites CA-IMP-8314, CA-IMP-8327, and CA-IMP-8389) are recommended as eligible for listing on the NRHP and the CRHR. North Baja would avoid impacts on the All-American Canal by use of the HDD crossing method. North Baja would mitigate impacts on Site CA-IMP-8327 by avoiding and monitoring it during construction and on Site CA-IMP-8389 by implementing data recovery and monitoring it during construction. Site CA-IMP-8314 is one of several cultural resources that collectively contribute to an archaeological district being proposed by the BOR. The BOR, the Quechan Indian Tribe, and the Kwaaymii Laguna Band of Indians requested that Site CA-IMP-8314 be avoided. The Agency Staffs' recommendation in Section 3.2.3.2 that North Baja adopt the Modified ISDRA Transmission Line Alternative would avoid impacts on this site. In response to other Native American requests, North Baja would have a monitor present during ground-disturbing activities along the alternative route south of Site CA-IMP-8314. The remaining 88 cultural resources have not been evaluated to determine eligibility for listing on the NRHP and the CRHR. Two of these sites would not be within the construction work area. Seventy-two of the unevaluated cultural resources are canals or other irrigation features, 13 are transmission/telephone lines or poles, and 1 is a railroad. North Baja would mitigate impacts on these features by monitoring them during construction to ensure avoidance. These methods are discussed in North Baja's Historic Properties Treatment Plan.

During the scoping process, the BOR identified the Coachella Canal as an important cultural resource. The IID Lateral route does not cross the Coachella Canal. In addition, a comment was received regarding the Plank Road. As discussed in Section 4.8.5, the Plank Road was a wooden, portable driving surface to provide for the passage of automobiles across the Algodones Dunes and was in use from 1916 through 1926 (BLM 1998). The Plank Road is a California State Historic Landmark. A portion of this cultural resource, consisting of remnants of metal strapping, was identified during surveys along the Modified ISDRA Transmission Line Alternative. As discussed above, the Agency Staffs have recommended in Section 3.2.3.2 that North Baja adopt the Modified ISDRA Transmission Line Alternative to avoid impacts on Site CA-IMP-8314. North Baja would avoid impacts on the portion of the Plank Road along the alternative alignment by installing exclusion fencing and monitoring the site during construction.

Ancillary Facilities

North Baja completed surveys of the 18th Avenue, Ripley, Ogilby, and IID Lateral (El Centro) Contractor Yards. No eligible cultural resources were identified at these yards.

North Baja has indicated it would complete surveys along any access roads that require improvements or modifications.

4.11.4 Unanticipated Discovery Plan

North Baja provided its Unanticipated Discovery Plan to be used in the event that cultural resources or human remains are discovered during construction. The plan includes contact procedures for the FERC; the SHPOs; the BLM; the BOR; the FWS, Cibola NWR; and Native American tribes, as appropriate. The plan provides for the protection in place of any unanticipated discoveries until appropriate evaluation and consultation have occurred. In the event that the discovery is determined to be of NRHP significance, a treatment plan (such as avoidance, monitoring, and/or scientific data recovery) would be developed and implemented in consultation with the appropriate parties. A member of one Native American tribe, the Kwaaymii Laguna Band of Indians, commented that the Unanticipated Discovery Plan should be updated to reflect recent burial legislation passed in California. North Baja has stated that it would update its plan to reflect this information.

4.11.5 Native American Consultation

North Baja originally contacted 18 Native American tribes whose traditional territories are crossed by the Project or who had been identified by the SHPOs or another knowledgeable party as having a potential cultural resources concern (see Table 4.11.5-1). North Baja sent initial consultation letters to the tribes on November 16, 2005. These letters described the Project and provided the tribes with the opportunity to comment on the Project and identify sites or places that might be of religious or cultural significance to the tribe. In early December 2005, North Baja conducted follow-up contacts with the Native American tribes by telephone. In addition, the tribes were contacted regarding participation in the cultural resources survey of the proposed pipeline route. Members of the Quechan Indian Tribe and the Campo Band of Mission Indians participated in the cultural resources surveys as Native American monitors.

At the time of North Baja's follow-up consultations, the majority of the tribes indicated they had no concerns about the proposed Project or had not yet reviewed the Project materials. Some of these tribes also requested to receive future Project updates. North Baja was not able to complete follow-up contacts with the Fort McDowell Yavapai Nation. The Gila River Indian Community and the Hualapai Tribe indicated they would defer comments to the Colorado River Indian Tribe. The Hualapai Tribe and the Torres-Martinez Desert Cahuilla Indians identified concerns about existing trails in the Project area. As discussed in Section 4.11.3, North Baja would monitor construction activities to avoid impacts on trails. The Salt River Pima-Maricopa Indian Community indicated it would defer comments to the Tohono O'odham Nation, which indicated it would defer comments to the Colorado River and Quechan Indian Tribes and the Mojave and Cocopah Tribes. The Hopi Tribe stated it would defer comments to the SHPO and other interested parties, that it had an interest in the White Tanks area, and that no known traditional cultural properties were in the Project area. The proposed Project would not affect the White Tanks area, which is near Phoenix. No Native American religious concerns were identified.

On September 27, 2006, North Baja met with members of the Quechan Indian Tribe, the Soboba Band of Luiseno Indians, the Cocopah Tribe, the BLM, and the BOR to discuss the Project status and provide a summary of the survey results and recommendations. North Baja provided its Evaluation Report and Historic Properties Treatment Plan to these tribes. In addition, members of the Quechan Cultural Committee met with representatives from North Baja and its cultural resources consultant on December 13, 2006, to discuss the Project status and the Quechan Indian Tribe's November 20, 2006 letter to the FERC providing comments on the draft EIS/EIR (see Section 6.0).

TABLE 4.11.5-1

North Baja's Native American Consultations Conducted for the North Baja Pipeline Expansion Project

Tribe/Contact Name	Date	Description of Consultation
AhaMaKav Cultural Society		
Elda Butler, Director [a]	12/8/05	Identified additional contact (Linda Otero).
Linda Otero	Multiple	Had not yet reviewed the initial consultation letter; would like to have a planning meeting with several invited tribes to discuss overall Project activities.
Ak-Chin Indian Community		
Terry O. Enos, Chairman [a]	12/7/05	The proposed Project is outside the tribe's area; requested to receive future Project updates.
Cabazon Band of Mission Indians		
John James, Chairperson [a]	12/7/05	No comments; requested to receive future Project updates.
Steve Thomas [a]	12/7/05	No comments; requested to receive future Project updates.
Cocopah Tribe		
Sherry Cordova, Chairwoman [a]	Multiple	Provided additional contact information (Paul Soto).
Paul Soto, Planning Department	12/13/05	Provided additional contact information (Cathi Alonzo, who identified Lisa Wanstall).
Lisa Wanstall, Museum Director	1/19/06	Provided another copy of the November 16, 2005 letter and copies of previous reports and maps.
	9/21/06	Provided copy of the Evaluation Report.
	11/30/06	Provided copy of the Historic Properties Treatment Plan.
Jill McCormick	9/27/06	Meeting with Project representatives to discuss the Project status and North Baja's survey results and recommendations.
Colorado River Indian Tribes		
Betty Cornelius [a]	12/7/05	Identified additional contact (Eric Shepard).
Daniel Eddy, Jr., Chairman [a]	Multiple	Requested a copy of the letter be sent to Eric Shepard.
Eric Shepard	12/8/05	Provided copy of November 16, 2005 letter.
	Multiple	Identified additional contact (Michael Tsosie).
	12/13/05	Has not yet reviewed the initial consultation letter.
Michael Tsosie	Multiple	Requested a copy of the initial consultation letter; requested copies of the background reports, data, and maps for review by the Cultural Committee.
	3/2/06	Provided Project information and survey reports.
	9/21/06	Provided copy of the Evaluation Report.
	11/30/06	Provided copy of the Historic Properties Treatment Plan.
Fort McDowell Yavapai Nation		
Raphael Bear, President,[a] Vince Lujan, and Debbie, Planning Department	Multiple	Multiple contacts and voicemails.
Fort Mojave Indian Tribe		
Nora McDowell, Chairwoman [a]	12/7/05	Identified additional contact (Dorothy Hallock).
Dorothy Hallock, Planning Department	Multiple	Indicated she would bring the consultation letter to a December 20, 2005 meeting and expected the tribe to provide a "no interest-no comment" decision.
	9/21/06	Provided copy of the Evaluation Report.
	11/30/06	Provided copy of the Historic Properties Treatment Plan.
Gila River Indian Community		
Richard Narcia, Governor [a]	Multiple	The tribe will defer comments to the Colorado River Indian Tribe.
Barnaby Lewis	11/30/06	Provided copy of the Historic Properties Treatment Plan.

TABLE 4.11.5-1 (cont'd)

North Baja's Native American Consultations Conducted for the North Baja Pipeline Expansion Project

Tribe/Contact Name	Date	Description of Consultation
Havasupai Tribe		
Linda Mahone, Chairwoman [a]	Multiple	Identified additional contact (Rex Toilusie).
Rex Toilusie, Environmental	Multiple	The tribe has no concerns about the proposed Project.
Hopi Tribe		
Wayne Taylor, Jr., Chairman [a]	12/2/05	Identified additional contact (Terry Morgart).
Terry Morgart	12/2/05	The tribe will defer comments to the State Historic Preservation Office and other interested parties; has an interest in the White Tanks area; no known traditional cultural properties are in the Project area of potential effect.
Hualapai Tribe		
Louise Benson, Chairwoman [a]	Multiple	Identified new tribal chairman (Charles Vaughn).
Charles Vaughn, Chairman	Multiple	Identified concerns about existing trails from Baja across the tribe's territory to a place called Wyckham, a prehistoric gathering spot; requested to receive future Project updates; identified additional contact (Loretta Jackson).
Loretta Jackson	12/9/05	The tribe will defer comments to the Colorado River Indian Tribe; requested to receive future Project updates.
	9/21/06	Provided copy of the Evaluation Report.
	11/30/06	Provided copy of the Historic Properties Treatment Plan.
Kwaaymii Laguna Band of Indians		
Carmen Lucas	2/9/07	Provided comments on the Project.
	3/13/07	Meeting with representatives of North Baja to discuss the Project, consultations with Native American tribes, Site CA-IMP-8314, the Unanticipated Discovery Plan, cumulative impacts on cultural resources, and site visits.
Los Coyotes Band of Mission Indians		
Katherine Saubel, Spokesperson [a]	12/8/05	No comments on the Project, which is outside the tribe's area; the tribe does not wish to receive further paperwork about this Project.
Quechan Indian Tribe-Ft. Yuma Indian Reservation		
Mike Jackson, Sr., President [a]	Multiple	Identified additional contact (Pauline Jose).
Pauline Jose	12/13/05	Provided copy of November 16, 2005 letter.
	Multiple	Requested another copy of the initial consultation letter.
	1/19/06	Meeting with Project representatives. The tribe requested to have a monitor accompany the cultural resources survey of the IID Lateral, asked about future plans for the Project, and requested another meeting to clarify additional planning and engineering questions.
	3/2/06	Provided Project information and survey reports.
	9/21/06	Provided copy of the Evaluation Report.
	2/2/07	Meeting with representatives of the BLM and North Baja to discuss Site CA-IMP-8314.
Earl Hawes [a]	12/8/05	No longer with the tribal government.
Bridget R. Nash-Chrabascz, Historic Preservation Officer	9/27/06	Meeting with Project representatives to discuss the Project status and North Baja's survey results and recommendations.
	11/20/06	Letter providing comments on the draft EIS/EIR.
	11/30/06	Provided copy of the Historic Properties Treatment Plan.
	2/2/07	Meeting with representatives of the BLM and North Baja to discuss Site CA-IMP-8314.
Quechan Cultural Committee	12/13/06	Meeting with Project representatives to discuss the Project status and the tribe's comments on the draft EIS/EIR.
Manfred Scott, Quechan Tribal Council	2/2/07	Meeting with representatives of the BLM and North Baja to discuss Site CA-IMP-8314.
Emilio Escalante, Quechan Tribal Council	2/2/07	Meeting with representatives of the BLM and North Baja to discuss Site CA-IMP-8314.

TABLE 4.11.5-1 (cont'd)

North Baja's Native American Consultations Conducted for the North Baja Pipeline Expansion Project

Tribe/Contact Name	Date	Description of Consultation
Salt River Pima-Maricopa Indian Community		
Joni Ramos, President [a]	Multiple	The tribe will defer comments to the Tohono O'odham Nation; requested to receive future Project updates.
Evelyn Andrews	Multiple	Requested copy of the initial consultation letter.
	12/20/05	Provided copy of November 16, 2005 letter.
	9/21/06	Provided copy of the Evaluation Report.
	11/30/06	Provided copy of the Historic Properties Treatment Plan.
Soboba Band of Mission Indians		
Robert J. Salgado, Sr., Chairman [a]	12/8/05	Identified new tribal chairman (Charlene Ryan).
Charlene Ryan, Cultural	Multiple	Requested copy of the initial consultation letter; believes the tribe will not have any comments on the proposed Project.
Benee Calac	9/21/06	Provided copy of the Evaluation Report.
	9/27/06	Meeting with Project representatives to discuss the Project status and North Baja's survey results and recommendations.
	11/30/06	Provided copy of the Historic Properties Treatment Plan.
Steven Estrada	9/27/06	Meeting with Project representatives to discuss the Project status and North Baja's survey results and recommendations.
Tohono O'odham Nation		
Vivian Juan-Saunders, Chairwoman [a]	Multiple	Multiple contacts and voicemails.
Peter Steer, Manager of Cultural Affairs	1/6/06	The tribe will defer comments to the Colorado River and Quechan Indian Tribes and the Mojave and Cocopah Tribes; requested a copy of the original survey report.
	9/21/06	Provided copy of the Evaluation Report.
	11/30/06	Provided copy of the Historic Properties Treatment Plan.
Torres-Martinez Desert Cahuilla Indians		
Ray Torres, Sr., Chairperson [a]	12/8/05	Identified new tribal chairman (Joe Loya).
Joe Loya	Multiple	Identified some concerns about the local trail systems near the proposed Project; requested to receive future Project updates.
Twenty-Nine Palms Band of Mission Indians		
Dean Mike, Chairperson [a]	12/8/05	Requested another copy of the initial consultation letter.
	12/22/05	The tribe has no concerns about the proposed Project.

[a] Recipients were sent North Baja's November 16, 2005 initial consultation letter.

On February 2, 2007, North Baja met with members of the Quechan Indian Tribe to discuss measures to reduce or avoid impacts on Site CA-IMP-8314. As discussed in Sections 3.2.3.2 and 4.11.3, Site CA-IMP-8314 would be avoided by the adoption of the Modified ISDRA Transmission Line Alternative.

A member of the Kwaaymii Laguna Band of Indians provided comments on the Project to North Baja in a letter dated February 9, 2007. North Baja subsequently met with the tribal member on March 13, 2007. Specifically, the tribal member provided comments on the consultations with Native American tribes, site visits, potential impacts on Site CA-IMP-8314, the Unanticipated Discovery Plan, and cumulative impacts on cultural resources. North Baja arranged site visits for the tribal member in mid-April 2007. As stated in Section 4.11.3, Site CA-IMP-8314 would be avoided by the adoption of the Modified ISDRA Transmission Line Alternative. In addition, North Baja would have a monitor present during ground-disturbing activities along the alternative route south of Site CA-IMP-8314. As discussed in Section 4.11.4, North Baja has stated that it would update its Unanticipated Discovery Plan to reflect recent burial legislation passed in California. Section 4.15.7 has been revised to include additional discussion of potential cumulative impacts on cultural resources.

No traditional cultural properties have been identified in the proposed Project's area of potential effect to date. North Baja has indicated it would continue consultations with Native American tribes throughout the Project.

In addition to North Baja's contacts, the NOI/NOP dated August 30, 2005 was sent to 64 individuals from 33 Native American tribes that were identified by the California Native American Heritage Commission. One tribe, the Ramona Band of Cahuilla, provided comments in response to the NOI/NOP. The tribe expressed concern regarding Native American sites and Native American artifacts that may be discovered during excavation. The tribe also commented that a Native American monitor should be present during field studies and construction and requested copies of the report. Native American monitors were present during the survey, and North Baja has indicated that it would invite Native American representatives on field visits to cultural resources sites that would be affected by the proposed Project. In addition, North Baja would include Native American tribes in consultations regarding the recommended mitigation measures at potentially significant cultural resources that may be of concern to the tribes. No other responses have been received to date.

4.11.6 General Impact and Mitigation

Project impacts or effects include not only the physical disturbance of a historic property, but may also include the introduction, removal, or alteration of various visual or auditory elements, which could alter the traditional setting or ambience of the property. Once cultural resources surveys and evaluations are complete, the FERC, in consultation with the SHPOs; the BLM; the BOR; the FWS, Cibola NWR; and Native American tribes, as applicable, would make determinations of eligibility and Project effects. Impacts on sites determined non-significant per NRHP eligibility criteria are not considered effects, and no further treatment or consideration is accorded these sites before construction and related Project activities. If a property listed on or eligible for listing on the NRHP would be affected, mitigation would be necessary. Mitigation may include, but not be limited to, one or more of the following measures: (1) avoidance through the use of realignment of the pipeline route, relocation of temporary extra workspaces, or changes in the construction and/or operational design; (2) data recovery, which may include the systematic professional excavation of an archaeological site or the preparation of photographs and/or measured drawings documenting standing structures; and (3) the use of landscaping or other techniques that would minimize or eliminate effects on the historic setting or ambience of standing structures.

The Arizona SHPO indicated that the previous surveys were adequate for the currently proposed Project areas in Arizona. Any newly proposed areas not previously surveyed would be surveyed and reported in an addendum. Inventory in California is not complete. Once cultural resources surveys and evaluations are complete, the FERC and the consulting parties discussed above would make determinations of eligibility and Project effects. If historic properties would be adversely affected, the FERC, as the lead Federal agency, would notify the ACHP to afford it an opportunity to participate in consultation. The CSLC would make the determination of eligibility for the CRHR for CEQA purposes. North Baja has prepared a treatment plan that specifies measures to reduce or mitigate impacts. Once the treatment plan is approved, a Memorandum of Agreement would be executed by the appropriate parties. North Baja would implement the specific treatment measures before Project construction is authorized by the FERC and the CSLC in any given area. Implementation of treatment would occur only after certification of the proposed Project. Implementation of treatment would ensure that Project-related adverse effects would be resolved for purposes of section 106 compliance, and reduced to less than significant levels for the purposes of NEPA compliance.

Generally under the CEQA, a project that follows the Secretary of Interior's Standards shall be considered as mitigated to a level of less than a significant impact on the historical resources. However, in some cases, documentation as mitigation is not sufficient to reduce the impact to a level that is less than significant (State CEQA Guidelines section 15126.4[b][2]). Thus, documentation of an "historical resource" may not necessarily mitigate the effects "to a point where clearly no significant effect on the environment would occur" as it does under section 106. Archaeological sites that are important for their data alone can usually be mitigated through data recovery (excavation).

To ensure that the FERC's responsibilities under the NHPA and its implementing regulations and the CSLC's responsibilities under the CEQA are met, **the Agency Staffs recommend that:**

- **North Baja shall defer implementation of any treatment plans/mitigation measures (including archaeological data recovery), construction of facilities, and use of all staging, storage, or temporary work areas and new or to-be-improved access roads on each respective Project phase <u>until North Baja files with the FERC and the CSLC, as applicable, the materials listed in items a. through g., and the steps listed in items h. through j. below have been completed</u>:**

  a. any FWS, Cibola NWR comments on the Overview and Survey Report;

  b. any BOR comments on the Evaluation Plan;

  c. any comments from the BOR and Native American tribes on the draft Evaluation Report;

  d. the revised Evaluation Report;

  e. the California SHPO's comments on Addendum Reports 2 and 3, the revised Evaluation Report, and the revised Historic Properties Treatment Plan;

  f. all additional cultural resources survey reports for denied access areas and any additional areas requiring survey, evaluation reports, and any necessary treatment plans as well documentation that these reports and plans were submitted to the SHPO(s); the BLM; the BOR; the FWS, Cibola NWR; and Native American tribes, as applicable;

g. any comments of the SHPO(s); the BLM; the BOR; the FWS, Cibola NWR; and Native American tribes, as applicable, on all additional cultural resources reports and plans;

h. the CSLC reviews and approves all cultural resources reports and plans prepared for the California portion of the Project and notifies North Baja in writing that construction may proceed;

i. the ACHP is afforded an opportunity to comment, if historic properties would be adversely affected; and

j. the Director of OEP reviews and approves all applicable cultural resources reports and plans and notifies North Baja in writing that treatment plans/mitigation measures may be implemented or construction may proceed.

All material filed with the FERC containing location, character, and ownership information about cultural resources must have the cover and any relevant pages therein clearly labeled in bold lettering: "CONTAINS PRIVILEGED INFORMATION - DO NOT RELEASE."

4.11.7 No Project Alternative

Under the No Project Alternative, the FERC would deny North Baja's application for a Certificate and a Presidential Permit amendment, the CSLC would deny North Baja's application for an amendment to its right-of-way lease across California's Sovereign and School Lands, and the BLM would deny North Baja's application to amend its existing Right-of-Way Grant and obtain a Temporary Use Permit for the portion of the Project on Federal lands. The No Project Alternative means that the Project would not go forward and the Project-related facilities would not be installed. Accordingly, none of the potential impacts on cultural resources identified for the construction and operation of the proposed Project would occur.

Because the proposed Project is privately funded, it is unknown whether North Baja would fund another energy project in California. However, should the No Project Alternative be selected, the energy needs identified in Section 1.1 would likely be addressed through other means, such as through other LNG or natural gas-related pipeline projects. Such projects may result in potential environmental impacts of the nature and magnitude of the proposed Project as well as impacts particular to their respective configurations and operations; however, these impacts cannot be predicted with any certainty at this time.

4.12 AIR QUALITY

4.12.1 Significance Criteria

An adverse impact on air quality would be considered significant and would require mitigation if Project construction or operation would:

- conflict with or obstruct implementation of an applicable air quality or attainment plan;
- violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- expose the public (especially schools, day care centers, hospitals, retirement homes, convalescence facilities, and residences) to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to one in a million and/or a hazard index (non-cancerous risk) greater than or equal to 0.1;
- impair air quality in a mandatory Class I Federal area; or
- create objectionable odors affecting a substantial number of people or affecting a lesser number of people for a substantial duration.

4.12.2 Existing Air Quality

Climatic conditions in the Palo Verde Valley and the Imperial Valley, which include the entire Project area, are governed by the large-scale sinking and warming of air in the semi-permanent subtropical high-pressure center of the Pacific Ocean. The coastal mountains prevent the intrusion of cool, damp marine air, which results in the Palo Verde and Imperial Valleys experiencing clear skies, low humidity, extremely hot summers, and mild winters. Moderate winds and deep thermal convection are produced by the flat terrain of the valleys and the strong temperature differentials created by intense solar heating. The combination of subsiding air, protective mountains, and distance from the ocean all combine to severely limit precipitation. Rainfall is highly variable and usually amounts to less than 2 inches annually. Occasionally, heavy storms can produce rainfall that exceeds the annual average.

National Ambient Air Quality Standards and Background Air Quality

Ambient air quality is protected by Federal, State, and local regulations. The EPA has established National Ambient Air Quality Standards (NAAQS) for criteria pollutants for the purpose of protecting human health (primary standards) and public welfare (secondary standards). These criteria pollutants are: nitrogen dioxide (NO_2), carbon monoxide (CO), ozone, SO_2, lead (Pb), PM_{10}, and $PM_{2.5}$.

The EPA established designations for a new 8-hour ozone standard, which are now in effect while the 1-hour ozone standard was revoked on June 15, 2005 in most areas, including the Project area. In addition to the Federal NAAQS, State ambient air quality standards have been established for Arizona and California. The Arizona ambient air quality standards are the same as the Federal standards.

California has adopted ambient air quality standards that are stricter than the Federal standards with the exception of the 8-hour CO standard.

The existing ambient air concentrations in the Project area were evaluated by reviewing representative air monitoring data from Imperial County and Riverside County monitoring locations in the Salton Sea and Mojave Desert Air Basins for the years 2003 through 2005. Table 4.12.2-1 lists the Federal and State ambient air quality standards and the background values estimated for each of the pollutants and averaging periods. These monitoring data show that the existing ambient air concentrations for ozone, PM_{10}, and $PM_{2.5}$ are above the Federal and State ambient air quality standards while the concentrations for Pb, NO_2, and SO_2 are below the Federal and State ambient air quality standards. CO ambient concentrations are below the Federal standards for both the 1-hour and 8-hour averaging periods. However, the 1-hour CO concentration exceeds the State ambient air quality standard.

TABLE 4.12.2-1

Federal and State Air Quality Standards and Existing Air Quality in the Project Area

Pollutant	Averaging Period	Federal/Arizona Primary Standards	Federal/Arizona Secondary Standard	California Standards	Highest Background Values [a]
O_3	1 Hour	-	Same as Primary	0.09 ppm	0.159 ppm [b]
	8 Hour	0.08 ppm		0.070 ppm	0.127 ppm [c]
PM_{10}	24 Hour	150 $\mu g/m^3$	Same as Primary	50 $\mu g/m^3$	227 $\mu g/m^3$ [b]
	Annual AM [d]	50 $\mu g/m^3$		20 $\mu g/m^3$	75 $\mu g/m^3$ [d]
$PM_{2.5}$	24 Hour	65 $\mu g/m^3$	Same as Primary	-	77 $\mu g/m^3$ [e]
	Annual AM	15 $\mu g/m^3$		12 $\mu g/m^3$	24.8 $\mu g/m^3$ [d]
Pb	Quarter	1.5$\mu g/m^3$	Same as Primary	1.5 $\mu g/m^3$	0.02 $\mu g/m^3$ [d]
CO	1 Hour	35 ppm	None	10 ppm	12.4 ppm [b]
	8 Hour	9 ppm		9.0 ppm	8.6 ppm [b]
NO_2	1 Hour	-	Same as Primary	0.25 ppm	
	Annual AM	0.053 ppm		-	0.022 ppm [d]
SO_2	1 Hour	-	-	0.25 ppm	
	3 Hour	-	0.5 ppm	-	
	24 Hour	0.14 ppm	-	0.04 ppm	0.015 ppm [b]
	Annual AM	0.030 ppm	-	-	

[a] Background value is the highest value reported by the EPA for the years 2003 through 2005 for monitors located in Imperial County and Riverside County.

[b] Second highest value.

[c] Fourth highest value.

[d] Arithmetic mean.

[e] 98th percentile value.

O_3 = ozone

PM_{10} = particulate matter having an aerodynamic diameter less than or equal to 10 microns

$PM_{2.5}$ = particulate matter having an aerodynamic diameter less than or equal to 2.5 microns

Pb = lead

CO = carbon monoxide

NO_2 = nitrogen dioxide

SO_2 = sulfur dioxide

NA = No data available

ppm = parts per million

Note: The lead standard for California is a 30-day averaging period.

Air Quality Control Regions (AQCRs) and Attainment Status

The AQCRs were established by the EPA and local agencies, in accordance with section 107 of the Clean Air Act (CAA), as a means to implement the CAA and comply with the NAAQS through State Implementation Plans (SIPs). The AQCRs are intra- and interstate regions such as large metropolitan areas where the improvement of the air quality in one portion of the AQCR requires emission reductions throughout the AQCR. Each AQCR, or portion thereof, is designated as attainment, unclassifiable, maintenance, or nonattainment for the NAAQS. The designations are based on compliance with the NAAQS. Areas where the ambient air pollutant concentration is determined to be below the applicable ambient air quality standard are designated attainment. Areas where no data are available are designated unclassifiable. Areas where the ambient air concentration is greater than the applicable ambient air quality standard are designated nonattainment. Areas that have been designated nonattainment but have since demonstrated compliance with the ambient air quality standard(s) are designated maintenance for that pollutant. Maintenance areas are treated similarly to attainment areas for the permitting of stationary sources; however, specific provisions may be incorporated through the State's approved maintenance plan to ensure that the air quality would remain in compliance with the ambient air quality standard(s) for that pollutant.

La Paz County, Arizona is designated as attainment or unclassifiable for all criteria pollutants. Portions of Riverside and Imperial Counties that are within the Project area are designated as nonattainment for ozone and PM_{10} and attainment for all other criteria pollutants including $PM_{2.5}$.

4.12.3 Regulatory Requirements

The proposed Project is potentially subject to a variety of Federal, State, and local regulations pertaining to the construction or operation of air emission sources. The CAA, 42 USC 7401 et seq., as amended in 1977 and 1990, and Title 40 CFR Parts 50 through 99 are the basic Federal statutes and regulations governing air pollution in the United States. The ADEQ is the governing agency for the portion of the Project that passes through La Paz County, Arizona. The Mojave Desert Air Quality Management District (AQMD) and the ICAPCD are the governing agencies for the portions of the Project within California.

The North Baja Pipeline Expansion Project would involve modifications at the existing Ehrenberg Compressor Station, El Paso Meter Station, and Ogilby Meter Station to allow northbound flow of natural gas. The Project would also involve the construction of 127.6 miles of natural gas pipeline, 2 meter stations, 13 valves, 4 pig launchers, 5 pig receivers, and 3 taps and crossover piping. Except for the construction equipment and activities associated with building these facilities, there would be no air emissions generated by these aboveground or pipeline facilities (i.e., no emissions would occur during operation).

Federal Air Quality Requirements

Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR) – Ambient air quality is protected by the EPA's PSD and Nonattainment NSR programs. The PSD regulations apply to new major stationary sources or major modifications to stationary sources located in attainment areas. The Nonattainment NSR regulations apply to new or modified stationary sources located in nonattainment areas. The PSD regulations, as codified in Title 40 CFR Part 52.21, define a major source or major modification as:

- a source with a potential-to-emit (PTE) of more than 100 tons per year (tpy) of any criteria pollutant for a facility that is one of the 28 industrial source categories listed in Title 40 CFR Part 52.21(b)(1)(i)(a);

- a source with a PTE of more than 250 tpy of any criteria pollutant for a facility that is not one of the 28 industrial source categories listed in Title 40 CFR Part 52.21(b)(1)(i)(a);

- a modification to an existing major source that results in a net emissions increase greater than the PSD significant emission rate specified in Title 40 CFR Part 52.21 (b)(23)(i); or

- an existing minor source proposing a modification that is major by itself.

One of the factors considered in the PSD permit review processes is potential impacts on protected Class 1 Federal areas. If a project is located within 100 kilometers of a Federal Class I area, additional modeling analysis may be required to determine the potential impact on the area. The Nonattainment NSR/PSD requirements apply to stationary sources. The proposed Project would not have any stationary source emissions associated with the operation of the Project; therefore, the Project is not subject to the Nonattainment NSR/PSD requirements. Because the modifications at the existing Ehrenberg Compressor Station would not trigger PSD review, an air quality impact determination would not be required. Additionally, the Project would not be located within 100 kilometers of a Federal Class I area; therefore, additional modeling analysis would not be necessary and it can be concluded that the potential for the Project to impact air quality in any Federal Class 1 areas would be less than significant.

Other Federal regulations (e.g., the New Source Performance Standards, the National Emission Standards for Hazardous Air Pollutants, and Title V of the CAA) that only apply to stationary sources are not applicable as well.

Mobile Source Regulations – Title II of the CAA Amendments of 1990 contains provisions relating to highway and off-road mobile sources. Regulations aimed at reducing pollution from heavy-duty diesel engines, including marine and locomotive engines, that have been promulgated or proposed include:

- Title 40 CFR Parts 69, 80, and 86, Final Rule, Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements – This rule requires a reduction in emissions from on-road diesel engines and establishes sulfur limits for diesel fuel. Currently, the requirements are for new engines only and the standards will begin to take effect in model year 2007. Although the emissions standards are for new engines only, the reduced sulfur diesel fuel, which is required to have a sulfur content less than 0.05 percent (500 parts per million by weight [ppmw]), a limit that was lowered to 15 ppmw starting in June 2006, would also reduce particulate and sulfur oxides (SO_x) emissions from existing diesel engines.

- Title 40 CFR Parts 9 and 69 et al., Final Rule, Control of Emissions of Air Pollution from Non-road Diesel Engines and Fuel – This rule requires emissions reductions from non-road diesel engines by establishing emissions limits and sulfur content limits. This rule targets agricultural equipment, construction equipment, and other non-road diesel engines. As with the previous rule, the reduced sulfur fuel would lower emissions from existing diesel engines even though the emissions limits would only apply to new engines.

Both non-road and highway use vehicles and construction equipment used for the Project would be required to use the new low sulfur diesel fuel as soon as it is commercially available.

General Conformity Determination – The EPA promulgated the General Conformity Rule on November 30, 1993 in Volume 58 of the Federal Register Page 63214 (58 Federal Register 63214) to implement the conformity provision of Title I, section 176(c)(1) of the CAA. Section 176(c)(1) requires that the Federal government not engage, support, or provide financial assistance for licensing or permitting, or approving any activity not conforming to an approved CAA implementation plan.

The General Conformity Rule is codified in Title 40 CFR Part 51, Subpart W and Part 93, Subpart B, *Determining Conformity of General Federal Actions to State or Federal Implementation Plans*. The General Conformity Rule applies to all Federal actions except programs and projects requiring funding or approval from the DOT, the Federal Highway Administration, the Federal Transit Administration, or the Metropolitan Planning Organization. In lieu of a conformity analysis, these latter types of programs and projects must comply with the Transportation Conformity Rule promulgated by the DOT on November 24, 1993 (58 Federal Register 62197).

The General Conformity Rule applies to projects that are located in nonattainment or maintenance areas and evaluates the impacts of both direct and indirect emissions from a proposed project. Accordingly, in the draft EIS/EIR, the Project emissions evaluated in the conformity applicability analysis included those associated with the construction and operation of the pipeline, specifically those direct and indirect emissions occurring in designated nonattainment areas. No new direct operating emission sources are proposed as part of the project and therefore are not included in the general conformity review. Various commentors on the draft EIS/EIR, including the EPA, the SCAQMD, the ICAPCD, and the Border Power Plant Working Group, indicated that the Agency Staffs' definition of the proposed Project and its emissions is too limited in focus. As discussed in Section 1.1, these commentors assert that the supplies of LNG-source gas that would be transported on the North Baja system would have a higher WI compared to existing supplies and, therefore, the introduction of the LNG-source gas would increase emissions of NO_x in the SCAB. These commentors state that a full General Conformity analysis should be conducted that considers the indirect air quality impacts of the end use of the gas.

As the lead Federal agency responsible for authorizing the proposed Project, the FERC has identified the emissions that would result from the Project in accordance with the published definitions of "direct" and "indirect" emissions in Title 40 CFR Part 51.852/93.152 and the supplementary information provided in the EPA's final rule for *Determining Conformity of General Federal Actions to State or Federal Implementation Plans* contained in 58 Federal Register 63214. This Project definition is supported by the EPA's response to comments included in 58 Federal Register 63214 on the proposed rule.

The General Conformity Rule was proposed on March 15, 1993 (58 Federal Register 13836). The preamble to the proposed rule invited comments on two proposed definitions of indirect emissions – "inclusive" and "exclusive." As defined in the final General Conformity Rule (58 Federal Register 63214), "exclusive" indirect emissions are "emissions of a criteria pollutant or its precursors that: (1) are caused by the Federal action, but may occur later in time and/or may be further removed in distance from the action itself but are still reasonably foreseeable; and (2) the Federal agency can practicably control and will maintain control over due to a continuing program responsibility of the Federal agency." The EPA states that this definition was selected because it met the requirements of section 176(c) of the CAA and because it was consistent with the Transportation Conformity Rule, can be reasonably implemented, and best fits within the overall framework of the CAA. The inclusive definition (which was broader and did not include the second part of the exclusive definition) was not selected because: (1) the mitigation

measures required may not be enforceable; (2) it is not consistent with the Transportation Conformity Rule; (3) it would impose an unreasonable burden due to the large number of affected Federal actions: and (4) it establishes an overly broad role for the Federal government in attaining the NAAQS. Further, the exclusive definition requires Federal agencies to consider only those emissions over which, under their legal authorities, they can exercise and maintain practicable control and over which they have continuing program responsibilities.

The final General Conformity Rule further states that "the exclusive definition assures that Federal actions will meet the intent of section 176(c) and the States will retain the primary responsibility to attain and maintain the air quality standards." Also, "a Federal agency has no responsibility to attempt to limit emissions that do not meet those tests, or that are outside the Federal agency's legal control. Moreover, neither section 176(c) of the CAA nor this regulation requires that a Federal agency attempt to 'leverage' its legal authority to influence or control non-Federal activities that it cannot practicably control, or that are not subject to a continuing program responsibility, or that lie outside the agency's legal authority."

"Reasonably foreseeable" emissions are defined in the final General Conformity Rule as "projected future indirect emissions that are identified at the time the conformity determination is made; the location of such emissions is known and the emissions are quantifiable, as described and documented by the Federal agency based on its own information and after reviewing any information presented to the Federal agency." An attempt to determine whether emissions from the end use of the natural gas delivered by the North Baja system are reasonably foreseeable for general conformity applicability identified several factors about the natural gas to be delivered by North Baja and the end use that are not known at this time. These factors include: (1) the precise WI of the natural gas to be delivered, other than it would meet the existing standards set by the CPUC for SoCalGas and SDG&E; (2) the sector of the SoCalGas market to which the gas would be delivered (no specific end users have been identified with the exception of the El Centro Generating Station in El Centro, California, which North Baja proposes to serve through a new lateral pipeline); (3) the ultimate character of the natural gas at the end user (the gas received by North Baja may be blended within the SoCalGas distribution system and the resultant WI of such blend is unknown); and (4) whether or not the gas would be consumed within the SCAB. The markets of North Baja's shippers are not limited to the SCAB, and capacity constraints on the SoCalGas system would prevent all of the gas volumes proposed in Phase II from moving into SoCalGas' system. Because the new supplies of North Baja's shippers would compete with existing gas supplies, it is impossible to determine at this time where LNG-source gas would be burned, how much LNG gas would be burned, and (due to limited data) the extent of changes in NO_x emissions associated with the burning of LNG gas. Also, the final General Conformity Rule provides examples of actions not reasonably foreseeable. One of these examples includes the resulting emissions from the use of electric power. This example was considered not reasonably foreseeable because the emissions cannot be precisely located or quantified. Similarly, the emissions from the end use of natural gas are not reasonably foreseeable.

The EPA has noted that "the requirements of this final rule will apply only in nonattainment and maintenance areas, as proposed," which is further supported in the June 5, 2006 EPA memorandum *Revision to General Conformity Applicability Questions and Answers*. This memorandum states "The purpose of this memorandum is to make you aware of a recent revision to our questions and answers (Q&A) document for the EPA's General Conformity regulations. Some questions have arisen concerning whether emissions generated outside a nonattainment area should be accounted when making a General Conformity determination for a Federal action. We are revising our Q&A document issued July 13, 1994, to clarify that only direct or indirect emissions originating in a nonattainment or maintenance area need to be analyzed for conformity with the applicable SIP." The new guidance states that the EPA interprets this statutory amendment to mean that any direct and indirect emissions originating in an attainment or

unclassifiable area do not need to be analyzed for General Conformity purposes, even if such emissions may transport into a nonattainment or maintenance area."

As supported by the General Conformity definitions, supplemental information, and subsequent guidance memos, the FERC has appropriately defined the Project's direct and indirect emissions to be those associated with the construction and operation of the pipeline facilities in the nonattainment counties where the Project would be located. With respect to General Conformity, the Project does not include emissions associated with construction and operation of any portion of the Project in areas designated as attainment or unclassifiable, areas outside the United States, or areas where future end users of the gas are or would be located.

One segment of the Project is located in a serious PM_{10} nonattainment area within Imperial County as well as a Subpart 2 marginal ozone nonattainment area in Imperial County. The Project does not include any nonattainment areas within Arizona and is not located within any maintenance areas. Relevant General Conformity regulations for the two jurisdictions with nonattainment areas include the ICAPCD Regulation IX, Rule 925, adopted on November 29, 1994; and the Mojave Desert AQMD Rule 2002, adopted on October 26, 1994. Rules 925 and 2002 were approved in revisions to both the California and Arizona SIPs in the Federal Register on April 23, 1999 (64 Federal Register 19916).

General Conformity assessments must be completed when the total direct and indirect emissions of a planned project would equal or exceed specified pollutant thresholds per year in each nonattainment area. With regard to the proposed Project, the relevant General Conformity pollutant thresholds are:

- $PM_{10:}$ 70 tpy for projects located in serious nonattainment areas; or
- ozone precursors: 100 tpy of VOC or NO_x for projects located in ozone nonattainment areas that are not within an ozone transport region and are not classified as serious, severe, or extreme.

As discussed in Section 4.12.4, Project emissions would be below General Conformity thresholds; therefore, a general conformity determination is not required.

State Air Quality Requirements

Because there would be no stationary sources or operational emissions associated with the proposed Project, the stationary source permitting requirements of the California Air Resources Board (CARB), ADEQ, the Mojave Desert AQMD, and the ICAPCD do not apply.

Mobile source and fugitive dust regulations adopted by the CARB, the ADEQ, the Mojave Desert AQMD, and the ICAPCD do apply to the construction activities associated with the proposed Project. Table 4.12.3-1 lists the mobile source and fugitive dust/opacity regulations that apply to the Project. These requirements include EPA Reasonably Available Control Measures such as using wetting agents, dust suppressants, and other means to prevent particulates from becoming airborne. Permits are not required for pipeline construction emissions from any of the above-noted agencies.

TABLE 4.12.3-1

Mobile Source and Fugitive Emissions (Dust) Rules

Agency	Rule Number	Rule Description
California Air Resources Board	CCR Title 13 Division 3	Mobile Source Operational and Pollution Control Requirements
Arizona Department of Environmental Quality	R18-2-604	Construction fugitive dust limitations
	R18-2-605	Road construction fugitive dust limitations
	R18-2-606	Material handling fugitive dust limitations
	R18-02-607	Storage pile fugitive dust limitations
	R18-2-702	Visible emission limitations
	R18-2-802	Off-road machinery opacity limitations
	R18-2-804	Roadway and site clearing opacity limitations
Mojave Desert Air Quality Management District	401	Visible emission limitations
	402	Nuisance
	403	Fugitive dust control
Imperial County Air Pollution Control District	401	Visible emission limitations
	407	Nuisance
	800-805 (Regulation VIII)	Fugitive dust control rules

Although CO_2 is not a regulated pollutant, it is associated with greenhouse gas (GHG) emissions, along with other gases such as methane and chlorofluorocarbons. GHG emissions are vital to life on earth because they help to maintain ambient temperatures. However, excess GHG emissions augment this effect and are considered by many experts to contribute to overall global climatic changes, typically referred to as global warming. CO_2 emissions are a product of fossil fuel combustion and tropical forest destruction, which are human activities that contribute to global climatic changes. Large quantities of GHG emissions would decrease the amount of infrared or heat energy radiated by the earth back to space and upset the heat balance. Global warming may ultimately contribute to a rise in sea level, destruction of estuaries and coastal wetlands, and changes in regional temperature and rainfall pattern, with significant agricultural and coastal community implications.

4.12.4 Air Emission Impacts and Mitigation

Construction activities for the proposed facilities (including the pipeline) would take place in the following four sequences: site preparation/trenching; foundation work; installation of equipment, structures, and pipeline; and right-of-way/site restoration. The anticipated construction periods for the various components of the proposed Project are described in Section 2.4. As discussed in Section 2.4, construction of Phase I would occur over a 2- to 4-month period in 2007, construction of Phase I-A would occur over a 2- to 4-month period in 2008 and 2009, and construction of Phase II would occur over a 4- to 6-month period in 2009. The construction activities that would generate emissions include land clearing, ground excavation, and cut and fill operations. These construction activities would occur 6 days per week for up to 12 hours per day during the construction periods. The intermittent and short-term emissions generated by these activities would include dust from soil disruption and combustion emissions from the construction equipment. Emissions associated with construction equipment include PM_{10}, $PM_{2.5}$, NO_2, CO, volatile organic compounds (VOC), SO_2, and small amounts of air toxics. These emissions could result in minor, temporary impacts on air quality in the vicinity of pipeline installation. Table 4.12.4-1 lists the estimated emissions of these criteria pollutants that would be generated by construction of the proposed Project facilities by year of construction in attainment and nonattainment areas.

TABLE 4.12.4-1

Estimated Emissions of Criteria Pollutants from Project Construction by Year

Source Category	PM_{10} (tons)	$PM_{2.5}$ (tons)	NO_x (tons)	CO (tons)	SO_x (tons)	VOC (tons)
2007/Arrowhead Extension/Riverside County/Attainment Area						
Construction Equipment [a]	0.43	0.39	8.19	3.27	1.52	0.76
Fugitive Dust	4.82	0.60	0.00	0.00	0.00	0.00
Commuter Traffic	0.00	0.00	0.01	0.05	0.00	0.01
Delivery Vehicles	0.01	0.01	0.66	0.25	0.00	0.04
2007 Attainment Area Total	*5.26*	*1.00*	*8.86*	*3.57*	*1.52*	*0.81*
2008/IID Lateral/Imperial County/Nonattainment Area						
Construction Equipment [a]	0.44	0.40	8.41	3.36	1.57	0.77
Fugitive Dust	31.76	4.77	0.00	0.00	0.00	0.00
Commuter Traffic	0.01	0.01	0.17	1.61	0.00	0.17
Delivery Vehicles	0.17	0.16	9.21	2.57	0.13	0.45
2008 Nonattainment Area Total	*32.38*	*5.34*	*17.79*	*7.54*	*1.70*	*1.39*
2009/IID Lateral/Imperial County/Nonattainment Area						
Construction Equipment [a]	0.05	0.05	1.04	0.41	0.19	0.10
Fugitive Dust	3.93	0.59	0.00	0.00	0.00	0.00
Commuter Traffic	0.00	0.00	0.02	0.20	0.00	0.02
Delivery Vehicles	0.02	0.02	1.14	0.32	0.02	0.06
2009/ B-Line/Imperial County/Nonattainment Area						
Construction Equipment [a]	1.21	1.11	22.37	9.22	4.13	2.13
Fugitive Dust	47.87	9.22	0.00	0.00	0.00	0.00
Commuter Traffic	0.01	0.01	0.10	0.93	0.00	0.10
Delivery Vehicles	0.18	0.17	9.40	6.19	0.01	0.88
2009 Nonattainment Area Total	*53.27*	*11.17*	*34.07*	*17.27*	*4.35*	*3.29*
2009/B-Line/Riverside County/Attainment Area						
Construction Equipment [a]	0.91	0.84	16.92	6.97	3.12	1.61
Fugitive Dust	36.21	6.98	0.00	0.00	0.00	0.00
Commuter Traffic	0.00	0.00	0.08	0.70	0.00	0.08
Delivery Vehicles	0.13	0.13	7.11	4.69	0.01	0.67
2009/B-Line/Imperial County/Attainment Area						
Construction Equipment [a]	1.01	0.93	18.67	7.69	3.44	1.78
Fugitive Dust	39.94	7.69	0.00	0.00	0.00	0.00
Commuter Traffic	0.01	0.00	0.08	0.77	0.00	0.08
Delivery Vehicles	0.15	0.14	7.84	5.17	0.01	0.74
2009 Attainment Area Total	*78.36*	*16.71*	*50.70*	*25.99*	*6.58*	*4.96*

[a] Construction equipment emissions include both on- and non-road construction equipment.

Emissions from construction of the pipeline and aboveground facilities are not expected to cause or significantly contribute to a violation of an applicable ambient air quality standard or contribute substantially to an existing or projected air quality violation because the construction equipment would be operated on an as-needed basis during daylight hours only and the emissions from gasoline and diesel engines would be minimized because the engines must be built to meet the standards for mobile sources established by the EPA. Most of the construction equipment would be powered by diesel engines and would be equipped with typical control equipment (e.g., catalytic converters), and Project-related vehicles and construction equipment would be required to use the new low sulfur diesel fuel as soon as it is

commercially available. In addition, North Baja would implement the following measures to minimize impacts on air resources.

- minimize idling time for diesel equipment whenever possible;
- ensure that diesel-powered construction equipment is properly tuned and maintained, and shut off when not in direct use;
- prohibit engine tampering to increase horsepower;
- use California Air Resources Board-certified low sulfur diesel fuel (less than 15 parts per million); and
- reduce construction-related trips as feasible for workers and equipment, including trucks.

Fugitive dust emissions (e.g., PM_{10}) would depend on the moisture content and texture of the soils that would be disturbed. The construction emissions would vary from day to day depending on the level of activity, the specific operations, and prevailing weather. The fugitive dust emissions due to construction activities on the pipeline segments as listed in Table 4.12.4-1 were estimated using an uncontrolled emission factor of 0.11 tons/acre-month based on a study conducted for the SCAQMD by the Midwest Research Institute (1996). Typically, the emission factor in the EPA's AP-42 *Compilation of Air Pollutant Emission Factors* is used; however, the Agency Staffs used the more relevant SCAQMD factor.[6] The emission factor for estimating fugitive dust from unpaved roads is based on empirical equations that include several factors, including silt content of the soil, average vehicle weight, and surface moisture content under natural conditions. The equation for estimating the emission factor for unpaved roads is found in AP-42, Section 13.2.2. The calculated emission factor for unpaved roads includes an assumed average silt content of 25 percent (average value derived from the Eastern Imperial County and Eastern Riverside County soil survey data), an average vehicle weight of 4.3 tons, and a surface soil moisture content of 1 percent. The number of days with measurable rain (greater than 0.01 inch) is also taken into account. The emissions estimate for worker travel (commuter traffic) includes the use of multi-passenger vehicles to transport construction workers from central staging areas.

Fugitive dust generated by construction activities would be minimized by the implementation of North Baja's Dust Control Plan (see Appendix L). The Dust Control Plan includes control measures identified as best management practices by some of the regulating agencies. The measures that would be implemented include:

- take every reasonable precaution to minimize fugitive dust emissions from construction activities;
- take every reasonable measure to limit visible density (opacity) of emissions to less than or equal to 20 percent;
- apply water one or more times per day to all affected unpaved roads, and unpaved haul and access roads;
- reduce vehicle speeds on all unpaved roads, and unpaved haul and access roads;

[6] The Mojave Desert AQMD has not developed its own emission factor.

- clean up track-out and/or carry-out areas at paved road access points at a minimum of once every 48 hours;

- if bulk transfer operations are required, spray handling and transfer points with water at least 15 minutes before use;

- cover all haul truck loads, or maintain at least 6 inches of freeboard space in each cargo compartment. Ensure that all haul truck cargo compartments are constructed and maintained to minimize spillage and loss of materials, and clean or wash each cargo compartment at the delivery site after removal of the bulk materials;

- apply water to active construction areas to limit visible density (opacity) of emissions to less than or equal to 20 percent;

- apply water to open and/or unvegetated areas to limit visible density (opacity) of emissions to less than or equal to 20 percent; and

- for temporary surfaces during periods of inactivity, restrict vehicular access by means of either fencing or signage, and apply water to comply with the stabilized surface requirements.

Although many of these measures clearly specify the performance requirement, some of the measures are vague and open to interpretation and, consequently, would be difficult to enforce during construction. Therefore, **the Agency Staffs recommend that:**

- **North Baja shall prepare a revised Project-wide Dust Control Plan that specifies the following:**

  a. the precautions that would be taken to minimize fugitive dust emissions from construction activities;

  b. the measures that would be taken to limit visible density (opacity) of emissions to less than or equal to 20 percent;

  c. how visual density would be measured to determine that it is less than or equal to 20 percent;

  d. how compliance with the 20 percent visual density requirement would be documented;

  e. the individuals with authority to determine if/when water needs to be reapplied for dust control;

  f. the speed limit that would be required on unpaved roads and unpaved haul and access roads; and

  g. the individuals with authority to stop work if the contractor does not comply with dust control measures.

The revised Project-wide Dust Control Plan shall be filed with the FERC and the CSLC for the review and written approval of the Director of OEP and the Executive Officer of the CSLC before construction.

In its comments on the draft EIS/EIR, the ICAPCD noted that North Baja's Dust Control Plan does not meet the Best Available Control Measures of the ICAPCD's Regulation VIII with regard to clean up of track-out areas. The ICAPCD also noted that additional track-out control devices and further dust control measures must be utilized if construction vehicle trips per day exceed the thresholds established in Regulation VIII. The ICAPCD asked that traffic at unpaved to paved intersections be quantified in the Dust Control Plan and the Dust Control Plan modified accordingly. To address the ICAPCD's comments on the draft EIS/EIR, **the Agency Staffs recommend that:**

- **North Baja shall prepare an Imperial County-specific Dust Control Plan that includes the measures of the revised Project-wide Dust Control Plan and meets the requirements of the ICAPCD's Regulation VIII. The Imperial County-specific Dust Control Plan shall be filed with the CSLC for the review and written approval of the Executive Officer of the CSLC before construction of the Imperial County portions of Phase I-A and Phase II.**

As discussed in Section 4.8.5, in their comments on the draft EIS/EIR, the EPA and the ICAPCD expressed concern about the generation of fugitive dust emissions associated with OHV use of the right-of-way and commented that North Baja's OHV Plan did not address enforcement and future monitoring of the proposed OHV blocking measures. In Section 4.8.5, the Agency Staffs have recommended that North Baja file a revised OHV Plan that addresses enforcement and future monitoring with the FERC and the CSLC before construction.

With the implementation of the Agency Staffs' recommendations, fugitive dust from Project construction activities and OHV use of the right-of-way is not expected to result in a violation of Federal or State ambient air quality standards or contribute substantially to an existing or projected air quality violation due to the transient and temporary nature of the construction activities. Further, all activities would be done in compliance with each agency's rules and regulations.

Construction of the Project would generate emissions of non-regulated GHG. CO_2 would be formed as a primary product of combustion of the diesel and gas engines used to power construction equipment and vehicles.

None of the proposed facilities would result in increased air emissions of criteria pollutants during operation; however, emissions of GHG could occur. Direct releases of methane could occur as a result of pipeline repair or maintenance operations. These releases would be infrequent over the lifetime of the Project and would likely involve only an isolated section of pipeline resulting in a negligible increase in GHG emissions.

The gas transported on the North Baja system to SoCalGas would be odorized by SoCalGas using its existing odorant facilities. Therefore, the Project would not create objectionable odors that would affect a substantial number of people or affect a lesser number of people for a substantial duration.

During the scoping process, the ICAPCD commented that the Mexican standards for gas quality and the WI are inadequate to protect air quality in the United States and requested that a comparison of the U.S. and Mexican standards be provided. In comments on the draft EIS/EIR, the EPA, the SCAQMD, the ICAPCD, and the Border Power Plant Working Group expressed concern that the supplies of LNG-source gas that would be transported on the North Baja system would have a higher WI compared to

existing supplies. These commentors assert that the introduction of the LNG-source gas would potentially increase emissions of NO_x in the SCAB, directly affecting air quality and making attainment of the Federal air quality standards more difficult. Some of the commentors requested that the FERC and the CSLC impose an upper limit on the WI for the gas received into North Baja's system and urged the Project approval to be conditioned upon the treatment of the gas prior to its delivery into the SCAB. Section 1.1 presents a detailed discussion of the current gas quality standards applicable to the SoCalGas and SDG&E systems.

The Agency Staffs have also concluded that they do not have legal authority to control nor do they have continuing program responsibility over the construction and operation of facilities located in Mexico (see Section 1.4). These upstream facilities are subject to the Mexican environmental regulatory review process and standards. However, in response to scoping comments, the air quality impacts on the United States from the associated upstream facilities are addressed in the cumulative impact analysis in Section 4.15.

4.12.5 Health Risk Assessment

A Health Risk Assessment was not conducted for the proposed Project because it would not result in increased operational emissions. Therefore, the potential for the Project to expose the public to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to one in a million and/or a hazard index (non-cancerous risk) greater than or equal to 0.1, would be less than significant.

A Health Risk Assessment was conducted to address the cumulative impacts associated with nonjurisdictional upstream facilities (see Section 4.15).

4.12.6 No Project Alternative

Under the No Project Alternative, the FERC would deny North Baja's application for a Certificate and a Presidential Permit amendment, the CSLC would deny North Baja's application for an amendment to its right-of-way lease across California's Sovereign and School Lands, and the BLM would deny North Baja's application to amend its existing Right-of-Way Grant and obtain a Temporary Use Permit for the portion of the Project on Federal lands. The No Project Alternative means that the Project would not go forward and the Project-related facilities would not be installed. Accordingly, none of the potential impacts on air quality identified for the construction and operation of the proposed Project would occur.

Because the proposed Project is privately funded, it is unknown whether North Baja would fund another energy project in California. However, should the No Project Alternative be selected, the energy needs identified in Section 1.1 would likely be addressed through other means, such as through other LNG or natural gas-related pipeline projects. Such projects may result in potential environmental impacts of the nature and magnitude of the proposed Project as well as impacts particular to their respective configurations and operations; however, these impacts cannot be predicted with any certainty at this time.

4.13 NOISE

4.13.1 Significance Criteria

An adverse impact on environmental noise levels would be considered significant and would require mitigation if Project construction or operation would cause:

- exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels;
- substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project; or
- substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project.

4.13.2 Existing Noise Levels

At any location, both the magnitude and frequency of environmental noise may vary considerably over the course of the day and throughout the week. This variation is caused in part by changing weather conditions and the effects of seasonal vegetative cover and human activity. Federal agencies use two measures to relate the time-varying quality of environmental noise to its known effect on people. The $L_{eq(24)}$ is the level of steady sound with the same total (equivalent) energy as the time-varying sound of interest, averaged over a 24-hour period. A second measure, the day-night equivalent sound level (L_{dn}) is calculated by adding 10 decibels on the A-weighted scale (dBA) to the nighttime sound levels between the hours of 10 PM and 7 AM to account for the greater sensitivity of people to sound during the nighttime hours. The A-weighted scale is used because human hearing is less sensitive to low and high frequencies than mid-range frequencies. The human ear's threshold of perception for noise change is 3 dBA.

The Project would occur primarily in rural range, desert, and agricultural areas. Noise sources in rural areas are predominantly natural, including insects, birds, wind, and weather. Accordingly, existing ambient noise levels near most of the pipeline routes are low. Background noise levels in wilderness and rural areas typically range between 35 dBA and 45 dBA (L_{dn}). The primary sources of noise in the rural residential and agricultural areas are roadway traffic and farm machinery on a seasonal basis. Background noise levels are approximately 40 dBA in rural residential areas and 45 dBA in agricultural cropland with equipment operating (FERC 2002, EPA 1978).

Noise-sensitive areas (NSAs) include residences, schools and day care facilities, hospitals, long-term care facilities, places of worship, libraries, and parks and recreational areas specifically known for their solitude and tranquility such as wilderness areas. The majority of the pipeline and aboveground facilities would be located in areas with little to no human population and few NSAs.

The existing Ehrenberg Compressor Station is considered a noise-generating facility. Principal noise sources at the compressor station include the air inlet, exhaust, and casing of the engines. Secondary noise sources include cooling fans, yard piping, and valves. Post-construction noise compliance testing after the Ehrenberg Compressor Station was constructed and placed into service confirmed that noise levels at nearby NSAs were below the FERC's limitation of 55 dBA L_{dn} with the

power turbines for all three compressors operating simultaneously at maximum horsepower. The proposed modifications at the existing Ehrenberg Compressor Station would not increase operational noise levels at the station.

4.13.3 Regulatory Requirements

The FERC guidelines do not specifically cover operational noise for the North Baja Pipeline Expansion Project aboveground facilities such as the meter stations, pig launchers, or pig receivers. Neither the States of Arizona nor California have Statewide noise regulations that would limit noise from these facilities; noise is regulated at the local level in both States.

In 1974, the EPA published Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA 1974). This publication evaluates the effects of environmental noise with respect to health and safety, and provides information for State and local governments to use in developing their own ambient noise standards. The EPA has determined that in order to protect the public from activity interference and annoyance outdoors in residential areas, noise levels should not exceed an Ldn of 55 dBA. An L_{dn} of 55 dBA is equivalent to a continuous noise level of 48.6 dBA for facilities that operate at a constant level of noise. The FERC has adopted the EPA guidelines.

The State of California does not promulgate Statewide standards for environmental noise but requires each county to include a noise element in its general plan (California Government Code section 65302[f]). In addition, Title 4 of the California Code of Regulations has guidelines for evaluating the compatibility of various land uses as a function of community noise exposure.

The La Paz County, Arizona Department of Community Development has approved a nuisance ordinance that prohibits any actions that are "offensive to the senses." No numerical standards for noise exist in the county. Imperial and Riverside Counties have community-based noise standards, which are implemented in the specific general plans for each region.

Chapter 7 of the Riverside County General Plan contains a noise element that sets the basic community standards for noise levels and allowable impacts from a wide range of commercial and industrial activities, including construction noise. The Riverside County noise element identifies construction noise as a temporary impact and establishes a set of policies to deal with noise mitigation during construction activities. These policies are identified as N12.1, N12.2, and N12.4. These policies are in large part related to land use because of the effects of noise on sensitive land uses. Stationary source land use noise standards for Riverside County are presented in Table 4.13.3-1 (Riverside County 2003).

TABLE 4.13.3-1

Stationary Source Land Use Noise Standards for Riverside County

Land Use	Interior Standards [a]	Exterior Standards [a]
Residential		
10:00 PM to 7:00 AM	40 L_{eq} (10 minute)	45 L_{eq} (10 minute)
7:00 AM to 10:00 PM	55 L_{eq} (10 minute)	65 L_{eq} (10 minute)

[a] L_{eq} (10 minute) = average noise level over a 10-minute period expressed in dBA.

The Imperial County General Plan also contains a community noise element that specifies the basic standards for acceptable noise levels from operational- (stationary) or construction-related sources as shown in Table 4.13.3-2.

TABLE 4.13.3-2

Noise Standards for Imperial County

Operation Noise Standards

Land Use Zone	Time	Applicable Limit Average Sound Level (dB)
Residential Zones	7 AM to 10 PM	50
	10 PM to 7 AM	45
Multi-residential Zones	7 AM to 10 PM	55
	10 PM to 7 AM	50
Commercial Zone	7 AM to 10 PM	60
	10 PM to 7 AM	55
Light Industrial/Industrial Park Zones	Anytime	70
General Industrial Zones	Anytime	75

Construction Noise Standards

Duration of Construction	Noise Source	Sound Level (dB Leq) [a]	Period of Averaging (hours)	Restricted Hours of Operation
Short-term (days or weeks)	Single piece of construction equipment	75	8	7 AM to 7 PM Monday-Friday 9 AM to 5 PM Saturday No commercial construction operation is permitted on Sundays and holidays.
Short-term (days or weeks)	Combination of pieces of construction equipment	75	8	7 AM to 7 PM Monday-Friday 9 AM to 5 PM Saturday No commercial construction is permitted on Sundays and Holidays
Extended-term [b]	Single piece of construction equipment	75	1	7 AM to 7 PM Monday-Friday 9 AM to 5 PM Saturday No commercial construction is permitted on Sundays and Holidays
Extended-term [b]	Combination of pieces of construction equipment	75	1	7 AM to 7 PM Monday-Friday 9 AM to 5 PM Saturday No commercial construction is permitted on Sundays and Holidays

[a] As measured at the nearest sensitive receptor.

[b] The standards assume a construction period, relative to an individual sensitive receptor, of days or weeks. The standard can be made more restrictive in cases of extended-length construction times.

dB = decibel

Source: County of Imperial General Plan Noise Element 1997c.

4.13.4 Noise Level Impacts and Mitigation

Construction Noise

Noise would be generated during construction of the pipeline and aboveground facilities. Noise associated with construction activities would be both temporary and intermittent because equipment would be operated on an as-needed basis during daylight hours. Therefore, the potential for construction

activities to result in the generation of or exposure of persons to excessive ground-borne vibration or ground-borne noise levels would be less than significant.

The most prevalent sound source during construction is anticipated to be the internal combustion engines used to provide mobility and operating power to construction equipment. The sound level impacts at NSAs from construction operations would depend on the type of equipment used, the mode of operation of the equipment, the length of time the equipment is in use, the amount of equipment used simultaneously, and the distance between the sound source and sensitive site. All of these factors would constantly change throughout the construction period, making the calculation of an L_{dn} or L_{eq} and, hence, the quantification of impacts difficult. Table 4.13.4-1 presents generalized data on construction noise at typical construction sites and its potential impacts on receptors at specified distances from the construction corridor. In general, receptors at distances greater than 1,650 feet should not experience noise levels above the community standards, and receptors closer than 1,650 feet should only experience noise levels above the community standards on an intermittent basis during daylight hours.

TABLE 4.13.4-1

Typical Noise Levels from Construction Equipment and Operations

Equipment Type	Measured Noise Level at 50 feet (dBA)	Predicted Noise Level at 500 feet (dBA)	Predicted Noise Level at 1,000 feet (dBA)	Predicted Noise Level at 2,000 feet (dBA)	Predicted Noise Level at 3,000 feet (dBA)
Crane	88	68	62	56	52
Backhoe	85	65	59	53	49
Pan Loader	87	67	61	55	51
Bulldozer	89	69	63	57	53
Fuel Truck	88	68	62	56	52
Water Truck	88	68	62	56	49
Grader	85	65	59	53	44
Roller	80	60	54	48	52
Mechanic Truck	88	68	62	56	52
Flat Bed Truck	88	68	62	56	52
Dump Truck	88	68	62	56	52
Tractor	80	60	62	56	44
Concrete Truck	86	66	60	54	50
Concrete Pump	82	62	56	50	46
Front End Loader	83	63	57	51	47
Scraper	87	67	61	55	51
Air Compressor	82	62	56	50	46
Average Construction Site	85	66	59	53	49

dBA = decibels of the A-weighted scale.

Pipeline construction would proceed at rates averaging about 1 mile per day. However, construction activities in any one area could last from several weeks to several months on an intermittent basis. Construction equipment would be operated on an as-needed basis during this period. Nighttime construction noise would be limited to HDDs at the Colorado River, All-American Canal, and the East Highline Canal crossings; hydrostatic testing activities; and bores under major highways or railroads. In some cases, these operations could require 24-hour work days; however, the duration of activities would be generally less than several days at road or railroad crossings although they could extend for up to 2 weeks at the HDD crossings. Hydrostatic testing would be limited to one 24-hour interval at four to five scattered locations.

Although certain noise-generating activities associated with pipeline construction (e.g., HDDs and bore operations) would occur at a single location for extended time periods and include nighttime activities, most activities would occur for limited lengths of time at a specific location and would occur during daytime hours. Additionally, a majority of the activities would occur away from population centers; therefore, the potential for the Project to result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project would be less than significant.

North Baja would comply with the noise elements included in the Riverside County and Imperial County General Plans; therefore, the potential for the Project to result in the exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies would be less than significant.

Operational Noise

During operation, there may be short-term noise impacts from aboveground facilities due to vehicles and equipment performing routine maintenance. A more intense noise impact would result from the infrequent blowdowns at the valves that would be located at Blythe and Ogilby, the El Centro Meter Station, and the Ehrenberg Compressor Station. Blowdowns involve the evacuation of gas, which enables piping to be taken out of service, typically for major repairs or maintenance. Blowdowns occur only on rare occasions; therefore, the noise impacts would be infrequent and temporary. As an example, no blowdowns have occurred on North Baja's existing system since it was placed in service 4 years ago. Despite the infrequency of blowdowns, in residential areas, North Baja would install silencers to reduce noise levels. In the event of a blowdown, nearby residences would be notified in advance if possible and North Baja would provide traffic control along public roadways near the blowdown location as needed. The proposed modifications at the Ehrenberg Compressor Station would not increase noise at the station during operation. Because the Project would not result in significant operational noise levels, the potential for the Project to result in a substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project would be less than significant.

4.13.5 No Project Alternative

Under the No Project Alternative, the FERC would deny North Baja's application for a Certificate and a Presidential Permit amendment, the CSLC would deny North Baja's application for an amendment to its right-of-way lease across California's Sovereign and School Lands, and the BLM would deny North Baja's application to amend its existing Right-of-Way Grant and obtain a Temporary Use Permit for the portion of the Project on Federal lands. The No Project Alternative means that the Project would not go forward and the Project-related facilities would not be installed. Accordingly, none of the potential impacts on noise levels identified for the construction and operation of the proposed Project would occur.

Because the proposed Project is privately funded, it is unknown whether North Baja would fund another energy project in California. However, should the No Project Alternative be selected, the energy needs identified in Section 1.1 would likely be addressed through other means, such as through other LNG or natural gas-related pipeline projects. Such projects may result in potential environmental impacts of the nature and magnitude of the proposed Project as well as impacts particular to their respective configurations and operations; however, these impacts cannot be predicted with any certainty at this time.

4.14 RELIABILITY AND SAFETY

The transportation of natural gas by pipeline involves some risk to the public in the event of an accident and subsequent release of gas. The greatest hazard is a fire or explosion following a major pipeline rupture.

Methane, the primary component of natural gas, is colorless, odorless, and tasteless. It is not toxic, but is classified as a simple asphyxiate, possessing a slight inhalation hazard. If breathed in high concentration, oxygen deficiency can result in serious injury or death.

Methane has an ignition temperature of 1,000 °F and is flammable at concentrations between 5 percent and 15 percent in air. Unconfined mixtures of methane in air are not explosive. However, a flammable concentration within an enclosed space in the presence of an ignition source can explode. It is buoyant at atmospheric temperatures and disperses rapidly in air.

4.14.1 Significance Criteria

An adverse impact on public safety would be considered significant and would require mitigation if Project construction or operation would:

- result in a substantial potential for incidents that would cause serious injury or death to members of the public;
- substantially diminish the level of fire and police services (reduction of acceptable response times);
- impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- significantly increase fire hazard in areas with flammable materials.

4.14.2 Safety Standards

The DOT is mandated to provide pipeline safety under Title 49, USC Chapter 601. The Pipeline and Hazardous Materials Safety Administration's (PHMSA), Office of Pipeline Safety (OPS) administers the national regulatory program to ensure the safe transportation of natural gas and other hazardous materials by pipeline. It develops safety regulations and other approaches to risk management that ensure safety in the design, construction, testing, operation, maintenance, and emergency response of pipeline facilities. Many of the regulations are written as performance standards that set the level of safety to be attained and allow the pipeline operator to use various technologies to achieve safety. The PHMSA ensures that people and the environment are protected from the risk of pipeline incidents. This work is shared with State agency partners and others at the Federal, State, and local level. Section 5(a) of the Natural Gas Pipeline Safety Act provides for a State agency to assume all aspects of the safety program for intrastate facilities by adopting and enforcing the Federal standards, while section 5(b) permits a State agency that does not qualify under section 5(a) to perform certain inspection and monitoring functions. A State may also act as the DOT's agent to inspect interstate facilities within its boundaries; however, the DOT is responsible for enforcement action. The majority of the States have either section 5(a) certifications or section 5(b) agreements, while nine States act as interstate agents. Both Arizona and California have section 5(a) certifications.

The DOT pipeline standards are published in Parts 190-199 of Title 49 of the CFR. Part 192 of Title 49 CFR specifically addresses natural gas pipeline safety issues.

Under a Memorandum of Understanding on Natural Gas Transportation Facilities (Memorandum) dated January 15, 1993 between the DOT and the FERC, the DOT has the exclusive authority to promulgate Federal safety standards used in the transportation of natural gas. Section 157.14(a)(9)(vi) of the FERC's regulations require that an Applicant certify that it will design, install, inspect, test, construct, operate, replace, and maintain the facility for which a Certificate is requested in accordance with Federal safety standards and plans for maintenance and inspection, or shall certify that it has been granted a waiver of the requirements of the safety standards by the DOT in accordance with section 3(e) of the Natural Gas Pipeline Safety Act. The FERC accepts this certification and does not impose additional safety standards other than the DOT standards. If the FERC becomes aware of an existing or potential safety problem, there is a provision in the Memorandum to promptly alert the DOT. The Memorandum also provides for referring complaints and inquiries made by State and local governments and the general public involving safety matters related to pipelines under the FERC's jurisdiction.

The FERC also participates as a member of the DOT's Technical Pipeline Safety Standards Committee, which determines if proposed safety regulations are reasonable, feasible, and practicable.

As part of the leasing process in California, the CSLC reviews pipeline projects to ensure that they are designed in compliance with applicable Federal and California standards, and that they reflect current geologic and seismic information. The CSLC's engineering and environmental review assesses both siting and safety issues, such as the location of the Project relative to seismic and populated areas, and the adequacy of the information contained in the Applicant's construction, operations, maintenance, and emergency response plans (e.g., proposed internal and external maintenance inspection processes, integrity testing methods to be applied, corrosion monitoring and testing and calibration of the cathodic protection system, leak monitoring, and emergency response plans and procedures). In determining whether or not to approve or amend a lease and/or certify the CEQA documentation for a project, the CSLC may consider if standards above the DOT minimum standards provided for in Title 49 CFR Part 192 are warranted in fault zone and populated areas, and may require additional safety measures, such as the installation of automatic shutoffs in these areas. For approved projects, the CSLC staff also reviews (for consistency with the CSLC's action on the lease) post-construction documentation, including "as-built" construction plans showing any design changes or other amendments to the project as approved, pipeline test results (e.g., smart pig and hydrostatic testing), and details of any extraordinary occurrences such as spill incidents and accidents.

The pipeline and aboveground facilities associated with the North Baja Pipeline Expansion Project would be designed, constructed, operated, and maintained in accordance with or to exceed the DOT Minimum Federal Safety Standards in Title 49 CFR Part 192 and the CPUC, General Order 112-E. These regulations, which are intended to protect the public and to prevent natural gas facility accidents and failures, include specifications for material selection and qualification; odorization of gas; minimum design requirements; and protection of the pipeline from internal, external, and atmospheric corrosion. To address seismic hazards, the facilities would be designed to meet or exceed the latest edition of the Uniform Building Code or International Building Code and to incorporate current seismological engineering standards, including the *Guidelines for the Design of Buried Steel Pipe* (American Lifelines Alliance 2001) and G*uidelines for the Seismic Design and Assessment of Natural Gas and Liquid Hydrocarbon Pipelines* (Pipeline Research Council International, Inc. 2004). In addition, North Baja's construction contractors would be required to comply with the OSHA Safety and Health Regulations for Construction in Title 29 CFR Part 1926.

The standards in the Federal regulations become more stringent as the human population density in the vicinity of the pipeline increases. Part 192 also defines area classifications, based on population density in the vicinity of the pipeline, and specifies more rigorous safety requirements for populated areas. The class location unit is an area that extends 220 yards on either side of the centerline of any continuous 1-mile length of pipeline. The four area classifications are as follows:

- Class 1 – Location with 10 or fewer buildings intended for human occupancy;
- Class 2 – Location with more than 10 but less than 46 buildings intended for human occupancy;
- Class 3 – Location with 46 or more buildings intended for human occupancy or where the pipeline lies within 100 yards of any building, or small well-defined outside area occupied by 20 or more people on at least 5 days a week for 10 weeks in any 12-month period; and
- Class 4 – Location where buildings with four or more stories aboveground are prevalent.

Class locations representing more populated areas require higher safety factors in pipeline design, testing, and operation. Pipelines constructed on land in Class 1 locations must be installed with a minimum depth of cover of 30 inches in normal soil and 18 inches in consolidated rock. Class 2, 3, and 4 locations, as well as drainage ditches of public roads and railroad crossings, require a minimum cover of 36 inches in normal soil and 24 inches in consolidated rock. All pipelines installed in navigable rivers, streams, and harbors must have a minimum cover of 48 inches in soil or 24 inches in consolidated rock. North Baja would design all railroad crossings in accordance with the AREMA *Manual for Railway Engineering, Part 5 Pipeline* and Title 49 CFR Part 192 *Transportation of Natural Gas by Pipeline: Minimum Federal Safety Standards*. The AREMA specifications require a minimum distance of 10 feet from the bottom of the rail to the top of the pipe. All road crossings would be designed to comply with Title 49 CFR Part 192 *Transportation of Natural Gas by Pipeline: Minimum Federal Safety Standards*, which specifies a minimum depth of cover of 3 feet in road ditches. In addition, all roadway and highway crossings would be designed to meet the applicable State and local agency permit requirements and the latest edition of American Petroleum Institute 1102 requirements.

Pipe wall thickness and pipeline design pressures, MAOP, hydrostatic test pressures, inspection and testing of welds, and frequency of pipeline patrols and leak surveys must also conform to higher standards in more populated areas. For the B-Line, North Baja proposes to use Class 1 pipe in comparable areas of the A-Line: between MPs 11.7 and 79.8. Class 2 pipe would be used between MPs 0.0 and 11.7 and at all road and railroad crossings within Class 1 locations. For the Arrowhead Extension, Class 2 pipe would be used. For the IID Lateral, Class 2 pipe would be used between MPs 45.0 and 45.7. Class 3 pipe would be used between MPs 0.0 and 0.25, 3.1 and 3.7, and 8.5 and 9.1. Class 1 pipe would be used in all other locations. The design pressure and MAOP of the pipeline facilities would be 1,150 psig. The normal operating pressure would be 1,050 psig. Hydrostatic test pressures would be 90 to 100 percent of the specified minimum yield strength of the pipe being tested.

If a subsequent increase in population density adjacent to the right-of-way indicates a change in class location for the pipeline, North Baja would be required to reduce the MAOP or replace the segment with pipe of sufficient grade and wall thickness to comply with the DOT code of regulations for the new class location.

Class locations also specify the maximum distance to sectionalizing remote manual block valves (referred to as valves in other sections of this document). Part 192 regulations require at least one valve

every 20 miles in Class 1 locations, every 15 miles in Class 2 locations, every 8 miles in Class 3 locations, and every 5 miles in Class 4 locations. The spacing between the valves for the North Baja Pipeline Expansion Project would meet or exceed the DOT requirements for the appropriate class location. The valves proposed for the B-Line would be adjacent to the existing valves on the A-Line.

External corrosion control measures include the protective coating on the exterior of the pipe and use of cathodic protection systems. These systems are designed to meet requirements established by the DOT for protection of metallic facilities from external, internal, and atmospheric corrosion. North Baja plans to use an impressed current system using deep well anodes placed in areas where their effect would provide the required negative-induced potential to resist external corrosion. The deep well anodes would be within the pipeline right-of-way. Aboveground facilities would be painted with a suitable anti-corrosion coating. Internal corrosion is not expected to be a factor because North Baja would monitor the pipeline interior through the use of internal corrosion probes, on-line pigging tools, or a combination of the two.

The aboveground cathodic protection facilities proposed for the Project include electrical rectifiers to provide the necessary electrical current and test leads for conducting system voltage tests. Rectifiers are generally mounted on power poles inside locked metal electrical boxes, where test leads are generally protected from weather in capped plastic risers designed for that purpose. During the scoping process, a question was raised whether North Baja plans any specific vandalism protection measures in high-use recreational areas. North Baja reports that no acts of vandalism along the existing A-Line have occurred to rectifiers and, therefore, it does not plan to implement any extraordinary vandalism protection measures on the cathodic protection devices. North Baja states that its biggest concern for possible vandalism would be rectifier installations in the ISDRA portion of the IID Lateral route; however, North Baja believes that the cathodic protection system can be designed for the pipeline facilities without utilizing this area for rectifier installations.

North Baja would x-ray all girth welds over 6 inches in diameter where possible to ensure pipeline structural integrity and compliance with the applicable DOT regulations. Where x-ray inspection is impossible or impractical, other means of non-destructive inspection would be conducted. Those welds that do not meet established specifications would be repaired or replaced. Once the welds are approved, the welded joints would be coated with a protective coating and the entire pipeline would be visually inspected for any faults, scratches, or other coating defects. Any damage would be repaired before the pipeline is installed.

After construction, North Baja would clearly mark the pipeline at line-of-sight intervals, roads, railroads, and other key points to alert the public to the presence of the pipeline. The markers would provide contact information for North Baja in the event of an emergency. In accordance with the DOT regulations in effect since 1982, North Baja would participate in all communication and notification "One-Call" services to prevent outside damage to the pipeline. These services provide preconstruction information to contractors or other maintenance workers on the underground location of pipes, cables, and culverts.

In 2002, Congress passed an act to strengthen the nation's pipeline safety laws. The Pipeline Safety Improvement Act of 2002 (HR 3609) was passed by Congress on November 15, 2002, and signed into law by the President in December 2002. By December 17, 2004, gas transmission operators were required to develop and follow a written integrity management program that contains all the elements described in Part 192.911 and addresses the risks on each covered transmission pipeline segment. Specifically, the law establishes an integrity management program that applies to all high consequence areas (HCAs). The DOT (68 Federal Register 69778, 69 Federal Register 18228, and 69 Federal Register

29903) defines HCAs as they relate to the different class zones, potential impact circles, or areas containing an identified site as defined in Part 192.903 of the DOT regulations.

The OPS published a series of rules from August 6, 2002 to May 26, 2004 (69 Federal Register 29903), that defines HCAs where a gas pipeline accident could do considerable harm to people and their property and requires an integrity management program to minimize the potential for an accident. This definition satisfies, in part, the Congressional mandate in Title 49, USC 60109 for the OPS to prescribe standards that establish criteria for identifying each gas pipeline facility in a high-density population area.

The HCAs may be defined in one of two ways. In the first method (Method 1), an HCA includes:

- current Class 3 and 4 locations;
- any area in Class 1 or 2 locations where the PIR[7] is greater than 660 feet and there are 20 or more buildings intended for human occupancy within the potential impact circle;[8] or
- any area in Class 1 or 2 locations where the potential impact circle includes an identified site.[9]

In the second method (Method 2), an HCA includes any area within a potential impact circle that contains:

- 20 or more buildings intended for human occupancy; or
- an identified site.

Once a pipeline operator has determined the HCAs on its pipeline, it must apply the elements of its integrity management program to those segments of the pipeline within HCAs. The DOT regulations specify the requirements for the integrity management plan at Part 192.911. The pipeline integrity management rule for HCAs requires inspection of the entire pipeline in HCAs every 7 years.

Before placing a natural gas pipeline into service, the DOT requires the facility operator to prepare an Operation and Maintenance Plan in accordance with the requirements in Title 49 CFR Part 192. North Baja would prepare and implement a plan that includes the following activities:

- employee qualification to operate and maintain the pipeline system in accordance with the Title 49 CFR Part 192 Operator Qualification Rule;
- air patrols of the pipeline right-of-way to monitor its condition, including any indications of third-party encroachment;
- on-the-ground leak surveys with leak detector equipment;
- annual contact of property owners, utilities, local government agencies, contractors, and other interested parties to inform them of the pipeline location and procedures to be followed in reporting and responding to a pipeline emergency;

---

[7] The potential impact radius is calculated as the product of 0.69 and the square root of the maximum allowable operating pressure of the pipeline in pounds per square inch multiplied by the pipeline diameter in inches.

[8] The potential impact circle is a circle of radius equal to the potential impact radius.

[9] An identified site is an outside area or open structure that is occupied by 20 or more persons on at least 50 days in any 12-month period; a building that is occupied by 20 or more persons on at least 5 days a week for any 10 weeks in any 12-month period; or a facility that is occupied by persons who are confined, are of impaired mobility, or would be difficult to evacuate.

- participation in a "One Call" system in each State where the pipeline is located, including staking and marking service for third-party construction and landowner requests;

- internal audits of field locations to ensure compliance with existing operating and maintenance standards and safe-work procedures;

- periodic pipe-to-soil potential surveys and rectifier inspections to maintain the line's cathodic protection;

- annual in-house training for operation and maintenance personnel to maintain skill levels and review safety procedures in case of a pipeline emergency; and

- annual testing and inspection of pressure-limiting devices and emergency shutdown systems at the compressor stations.

Section 14.14.4 includes an assessment of potential HCAs associated with the North Baja Pipeline Expansion Project.

The existing pipeline system is monitored and controlled 24 hours a day for pressure drops in the pipeline that could indicate a leak or other operating problem through a SCADA system. A detailed description of the SCADA system is included in Section 2.6. In addition, a crew that conducts on-site operations and maintenance is at the Ehrenberg Compressor Station, and is on-call 24 hours a day. When completed, the B-Line, Arrowhead Extension, and IID Lateral would be operated in conjunction with the existing system and subject to the same operation and maintenance procedures.

The pipeline would be designed to be piggable, allowing for the future use of smart pigs for internal integrity inspection. In addition, North Baja would run a gauging plate and, if warranted, a caliper tool to determine if there are any dents in the pipeline as a result of construction. Dents that exceed those allowable by code would be removed before placing the pipeline into service.

Within the first 6 months of placing the pipeline into operation, North Baja would conduct an internal inspection of the pipeline. This inspection would use an in-line magnetic flux leakage inspection tool (i.e., smart pig). The record of this inspection would serve as an initial set of data that would be compared to future internal inspections so that changes in pipe condition, primarily pipe wall thickness loss, can be readily determined and corrected. The initial test would likely not indicate any anomalies that would require correction because the pipeline would be new and would have completed a successful hydrostatic test. Following the initial test, internal inspections with a high resolution instrument would be conducted on a periodic basis, at a minimum of one inspection every 10 years, or sooner if the evidence suggests that significant corrosion or defects exist or if any new Federal or State regulations require more frequent or comparable inspections.

The pipeline system would be inspected by air and on the ground to observe right-of-way conditions and identify indications of leaks, evidence of pipeline damage, evidence of encroachment (i.e., landowners building permanent structures on the permanent right-of-way), or damage to erosion controls resulting from erosion or washouts. North Baja would comply with other DOT surveillance, leak detection requirements such as leakage surveys, aerial surveys, and pedestrian surveys of its facilities.

To ensure that North Baja's operation and maintenance commitments are documented in a comprehensive plan and to assist the CSLC in reviewing the Project for consistency with the CSLC's action on the amended lease across California's Sovereign and School Lands, **the Agency Staffs recommend that:**

- **Before placing the pipeline system into service in California, North Baja shall submit to the CSLC for approval an Operation and Maintenance Plan. This plan shall address internal and external maintenance inspections of the completed facility, including but not limited to details of integrity testing methods to be applied, corrosion monitoring and testing of the cathodic protection system, and leak monitoring. The Operation and Maintenance Plan shall also specify that North Baja would, unless expressly prohibited by DOT regulations, conduct an internal inspection with a high-resolution instrument on a periodic basis, at a minimum of one inspection every 10 years, or sooner if the evidence suggests that significant corrosion or defects exist or if any new Federal or State regulations require more frequent or comparable inspections. Within 3 months following any new Federal or State regulations, North Baja shall update the Operation and Maintenance Plan and submit a revised copy to the CSLC. In addition, the Operation and Maintenance Plan shall include procedures for implementing operational mitigation measures recommended (if any) by the site-specific seismic hazard evaluation reports for the Project.**

In accordance with Part 192.615, North Baja would develop an Emergency Response Plan comparable to that developed for the A-Line that includes procedures to respond to and minimize the hazards from a natural gas pipeline emergency along its system. The Emergency Response Plan would include the following:

- local field headquarters to contact;
- listing of company personnel, local police, and fire authorities to contact;
- listing of equipment available at field locations;
- description of the roles of field supervisors, gas control operators, field crews, and support personnel during an emergency;
- description of procedures for maintaining communication between gas control operators and local fire, police, and government authorities;
- description of procedures for securing additional help from non-company resources; and
- requirements for logging emergency events and reporting the emergency to company and regulatory authorities.

Key elements of the plan also include procedures for:

- receiving, identifying, and classifying emergency events, gas leakage, fires, explosions, and natural disasters;
- establishing and maintaining communications with local fire, police, and public officials, and coordinating emergency response;
- making personnel, equipment, tools, and materials available at the scene of an emergency;
- protecting people first and then property, and making them safe from actual or potential hazards; and

- emergency shutdown of the system and safe restoration of service.

In the unlikely event of a pipeline rupture caused by a seismic event (or any other cause), North Baja would implement its emergency response procedures. All North Baja facilities would be designed with remote manual pipeline block valves with automatic shutdown capability that are programmed to sense pipeline ruptures and to isolate a specific pipeline valve section in the case of a catastrophic rupture in that valve section. Like the existing North Baja system, a precipitous pressure drop would trigger an alarm at North Baja's Gas Control Center, which is staffed 24 hours a day. The operator would have 10 minutes in which to determine whether the pressure drop is caused by something other than a rupture and either override the alarm or initiate a shutdown. If neither of these actions is taken by the operator within 10 minutes, or if line pressure decreases to a pre-determined threshold before 10 minutes, the valve would close automatically.

North Baja currently has procedures in place in the event of an emergency to utilize the Spokane, Washington operations center as an emergency call center. This call center is in the process of being changed to Redmond, Oregon. By the time the proposed Project would be in operation, the Redmond center would likely be operational. There would also be a corporate call center in Calgary, Alberta, Canada. The purpose of the call centers in the first few minutes following a rupture is to mobilize company resources to secure the incident site and notify local first responders of the incident. The incident site is surrendered to local first responders upon their arrival. Procedures are also in place to notify Sempra of any incident occurring on the North Baja facilities so that it can respond appropriately with regard to its facilities and jurisdictions in Mexico. North Baja's valves and emergency response procedures would reduce the potential for significant fire hazard in areas with flammable materials.

4.14.3 Pipeline Accident Data

If a pipeline rupture were to occur after pipeline operation has begun, natural gas would percolate through the soil and rapidly dissipate into the atmosphere. The potential outcome would depend on the volume of natural gas released and whether an ignition source is available. A pipeline break could result in soil and debris being thrown from the area of the break, destruction of nearby vegetation, and, in the case of ignition, explosion or fire causing injury or property damage.

Since February 9, 1970, Title 49 CFR Part 191 has required all operators of transmission and gathering systems to notify the DOT of any reportable incident and to submit a report on form F7100.2 within 20 days. Reportable incidents are defined as any leaks that:

- caused a death or personal injury requiring hospitalization;
- required taking any segment of transmission line out of service;
- resulted in gas ignition;
- caused estimated damage to the property of the operator, or others, or both, of a total of $5,000 or more;
- required immediate repair on a transmission line;
- occurred while testing with gas or another medium; or
- in the judgment of the operator was significant, even though it did not meet the above criteria.

The DOT changed reporting requirements after June 1984 to reduce the amount of data collected. Since that date, operators must only report incidents that involve property damage of more than $50,000, injury, death, release of gas, or that are otherwise considered significant by the operator. Table 4.14.3-1 presents a summary of incident data for the 1970 to 1984 period, as well as more recent incident data for 1986 through 2005, recognizing the difference in reporting requirements. The 14.5-year period from 1970 through June 1984, which provides a larger universe of data and more basic report information than subsequent years, has been subject to detailed analysis, as discussed in the following sections.[10]

TABLE 4.14.3-1

Natural Gas Service Incidents by Cause

	Incidents per 1,000 miles of pipeline (percentage)	
Cause	1970-1984	1986-2005
Outside force	0.70 (53.8)	0.10 (38.5)
Corrosion	0.22 (16.9)	0.06 (23.1)
Construction or material defect	0.27 (20.8)	0.04 (15.4)
Other	0.11 (8.5)	0.06 (23.1)
Total	1.30	0.26

During the 14.5-year period, 5,862 service incidents were reported over the more than 300,000 total miles of natural gas transmission and gathering systems nationwide. Service incidents, defined as failures that occur during pipeline operation, have remained fairly constant over this period with no clear upward or downward trend in annual totals. In addition, 2,013 test failures were reported. Correction of test failures removed defects from the pipeline before operation.

Additional insight into the nature of service incidents may be found by examining the primary factors that caused the failures. Table 4.14.3-1 provides a percentage distribution of the causal factors as well as the annual frequency of each factor per 1,000 miles of pipeline in service.

The dominant incident cause is outside forces, constituting 53.8 percent of all service incidents between 1970 and 1984 and 38.5 percent between 1986 and 2005. Outside forces incidents result from the encroachment of mechanical equipment such as bulldozers and backhoes; earth movements due to soil settlement, washouts, or geologic hazards; weather effects such as winds, storms, and thermal strains; and willful damage. Table 4.14.3-2 shows that, of the service incidents caused by outside forces, human error in equipment usage was responsible for approximately 75 percent of the incidents. Since April 1982, operators have been required to participate in "One-Call" public utility programs in populated areas to minimize unauthorized excavation activities in the vicinity of pipelines. The 1986 through 2005 data show that the portion of incidents caused by outside forces has decreased to 38.5 percent (see Table 4.14.3-1).

TABLE 4.14.3-2

Outside Forces Incidents by Cause (1970-1984)

Cause	Percent
Equipment operated by outside party	67.1
Equipment operated by or for operator	7.3
Earth movement	13.3
Weather	10.8
Other	1.5

[10] American Gas Association 1986. "An Analysis of Reportable Incidents for Natural Gas Transportation and Gathering Lines 1970 Through June 1984." NG-18 Report No. 158, Pipeline Research Committee of the American Gas Association. D.J. Jones, G.S. Kramer, D.N. Gideon, and R.J. Eiber.

As noted above, outside forces can include geologic hazards. The primary geologic hazard that could affect the North Baja Pipeline Expansion Project would be seismicity. The potential seismic impacts associated with the Project and North Baja's proposed mitigation measures are discussed in Section 4.1.4.

The pipelines included in the data set in Table 4.14.3-1 vary widely in terms of age, pipe diameter, and level of corrosion control. Each variable influences the incident frequency that may be expected for a specific segment of pipeline.

The frequency of service incidents is strongly dependent on pipeline age. While pipelines installed since 1950 exhibit a fairly constant level of service incident frequency, pipelines installed before that time have a significantly higher rate, partially due to corrosion. Older pipelines have a higher frequency of corrosion incidents, because corrosion is a time-dependent process. Further, new pipe generally uses more advanced coatings and cathodic protection to reduce corrosion potential.

Older pipelines have a higher frequency of outside forces incidents partly because their location may be less well known and less well marked than newer lines. In addition, smaller diameter pipelines constitute a disproportionate number of the older pipelines, which have a greater rate of outside forces incidents. Small diameter pipelines are more easily crushed or broken by mechanical equipment or earth movements.

Table 4.14.3-3 clearly demonstrates the effectiveness of corrosion control in reducing the incidence of failures caused by external corrosion. The use of both an external protective coating and a cathodic protection system, required on all pipelines installed after July 1971, significantly reduces the rate of failure compared to unprotected or partially protected pipe. The data show that bare, cathodically protected pipe actually has a higher corrosion rate than unprotected pipe. This anomaly reflects the retrofitting of cathodic protection to actively corroding spots on pipes.

TABLE 4.14.3-3

External Corrosion by Level of Control (1970-1984)

Corrosion Control	Incidents per 1,000 miles per year
None-bare pipe	0.42
Cathodic protection only	0.97
Coated only	0.40
Coated and cathodic protection	0.11

4.14.4 Impact on Public Safety

The service incident data summarized in Table 4.14.3-1 include pipeline failures of all magnitudes with widely varying consequences. Approximately two-thirds of the incidents were classified as leaks, and the remaining third classified as ruptures, implying a more serious failure.

Table 4.14.4-1 presents the average annual fatalities that occurred on natural gas transmission and gathering lines from 1970 to 2005. Fatalities between 1970 and June 1984 have been separated into employees and nonemployees, to better identify a fatality rate experienced by the general public. Of the total 5.0 nationwide average, fatalities among the public averaged 2.6 per year over this period. The simplified reporting requirements in effect after June 1984 do not differentiate between employees and nonemployees. However, the data show that the total annual average for the period 1984 through 2005 decreased to 3.6 fatalities per year. Subtracting two major offshore incidents in 1989, which do not reflect the risk to the onshore public, yields a total annual rate of 2.8 fatalities per year for this period.

TABLE 4.14.4-1

Annual Average Fatalities - Natural Gas Transmission and Gathering Systems [a, b]

Year	Employees	Nonemployees	Total
1970-June 1984	2.4	2.6	5.0
1984-2005 [c]	-	-	3.6
1984-2005 [c]	-	-	2.8 [d]

[a] 1970 through June 1984 - American Gas Association 1986.

[b] DOT Hazardous Materials Information System.

[c] Employee/nonemployee breakdown not available after June 1984.

[d] Without 18 offshore fatalities that occurred in 1989 (11 fatalities resulted from a fishing vessel striking an offshore pipeline and 7 fatalities resulted from an explosion on an offshore production platform).

The nationwide totals of accidental fatalities from various manmade and natural hazards are listed in Table 4.14.4-2 in order to provide a relative measure of the industry-wide safety of natural gas pipelines. Direct comparisons between accident categories should be made cautiously, however, because individual exposures to hazards are not uniform among all categories. Nevertheless, the average 2.6 public fatalities per year is relatively small considering the more than 300,000 miles of transmission and gathering lines in service nationwide. Furthermore, the fatality rate is approximately two orders of magnitude (100 times) lower than the fatalities from natural hazards such as lightning, tornados, floods, earthquakes, etc.

TABLE 4.14.4-2

Nationwide Accidental Deaths [a]

Type of Accident	Fatalities
All accidents	90,523
Motor vehicles	43,649
Falls	14,985
Drowning	3,488
Poisoning	9,510
Fires and burns	3,791
Suffocation by ingested object	3,206
Tornado, flood, earthquake, etc. (1984 to 1993 average)	181
All liquid and gas pipelines (1978 to 1987 average) [b]	27
Gas transmission and gathering lines Nonemployees only (1970 to 1984 average) [c]	2.6

[a] All data, unless otherwise noted, reflect 1996 statistics from the U.S. Department of Commerce, Bureau of the Census, "Statistical Abstract of the United States 118th Edition."

[b] U.S. Department of Transportation "Annual Report on Pipeline Safety - Calendar Year 1987."

[c] American Gas Association 1986.

The available data show that natural gas pipelines continue to be a safe, reliable means of energy transportation. Based on approximately 301,000 miles in service, the rate of public fatalities for the nationwide mix of transmission and gathering lines in service is 0.01 per year per 1,000 miles of pipeline. Using this rate, the pipeline facilities associated with the North Baja Pipeline Expansion Project might result in a public fatality about every 793 years. This would represent a slight increase in risk to the nearby public and would not result in a substantial potential for incidents that would cause serious injury or death to members of the public.

As discussed in Section 4.14.2, North Baja would be required to develop an integrity management program that applies to all HCAs. There are no indicated HCAs for North Baja's existing

A-Line, but preliminary data indicate that it is likely that two locations along the proposed B-Line might qualify as HCAs. These locations are near MPs 27.0 and 75.0. There are no locations along the Arrowhead Extension that would classify as an HCA. Along the IID Lateral, the ISDRA portion of the route (MPs 0.0 to 7.0) would classify as an HCA and the newly constructed RV park near MP 9.0 might classify as an HCA using Method 1 of the HCA determination protocols. No HCAs were identified along the Project using Method 2. The HCAs potentially crossed by the proposed Project are listed by milepost and pipeline class in Table 4.14.4-3. As required by the DOT, North Baja would conduct a comprehensive HCA assessment of the new pipeline segments following construction. The existing North Baja pipeline facilities are presently managed under an Integrity Management Program plan that ensures compliance with Title 49 CFR Part 192, Subpart O. The newly constructed facilities would be incorporated into the existing plan. Pipeline inspection within identified HCAs would be conducted every 7 years in accordance with the pipeline integrity management rule for HCAs. Additional discussion of potential impact radii as they relate to minority and low-income populations is provided in Section 4.17.4.

TABLE 4.14.4-3

Preliminary Identification of High Consequence Areas (HCAs) Crossed by the North Baja Pipeline Expansion Project [a]

Facility/Milepost Range per Pipeline Class	Pipeline Class	HCA Milepost
B-Line		
0.0 - 11.7	Class 2	None
11.7 - 79.8	Class 1	27.0, 75.0
Arrowhead Extension		
0.0-2.1	Class 2	None
IID Lateral		
0.0-0.25	Class 3	0.0-0.25
0.25-3.1	Class 1	0.25-3.1
3.1-3.7	Class 3	3.1-3.7
3.7-8.5	Class 1	3.7-7.0
8.5-9.1	Class 3	9.0
9.1-45.0	Class 1	None
45.0-45.7	Class 2	None

[a] All HCAs were determined by Method 1.

HCA Determination Method 1 = current Class 3 and 4 locations or any area in Class 1 or 2 locations where the potential impact radius is greater than 660 feet and there are 20 or more buildings intended for human occupancy within the potential impact circle; or any area in Class 1 or 2 locations where the potential impact circle includes an identified site.

Part 192 requires that each operator must establish and maintain liaison with appropriate fire, police, and public officials to learn the resources and responsibilities of each organization that may respond to a natural gas pipeline emergency, and to coordinate mutual assistance. The operator must also establish a continuing education program to enable customers, the public, government officials, and those engaged in excavation activities to recognize a gas pipeline emergency and report it to appropriate public officials. Local police and fire departments would be informed of North Baja's Operation and Maintenance and Emergency and Response Plans. Annual meetings would be held with local police and fire authorities to review the plans and discuss procedures to follow in case of an emergency. Police and fire departments would also receive emergency telephone numbers where they can contact North Baja 24 hours a day. North Baja would provide the appropriate training to local emergency service personnel before the pipeline is placed in service. No additional specialized local fire protection equipment would be required to handle pipeline emergencies. As a result of North Baja's coordination with local

emergency providers, the level of fire and police services would not be substantially diminished. North Baja has continued to coordinate with local police and fire departments during operation of the A-Line. The Winterhaven Fire Projection District and the Ehrenberg Fire Department submitted comments on the draft EIS/EIR in support of the Project and citing North Baja's commitment to safety. North Baja's continued coordination with local emergency providers would reduce the potential to impair implementation of or interference with any local adopted emergency response or evacuation plans.

4.14.5 Terrorism

In the aftermath of the terrorist attacks that occurred on September 11, 2001, terrorism has become a very real issue for the facilities under the FERC's jurisdiction. The FERC, like other Federal agencies, is faced with a dilemma in how much information can be offered to the public while still providing a significant level of protection to energy facilities. Consequently, the FERC has removed energy facility design plans and location information from its Internet website to ensure that sensitive information is not readily available (RM02-4-000 and PL02-1-000 issued February 20, 2003).

Since September 11, 2001, the FERC has been involved with other Federal agencies in developing a coordinated approach to protecting the energy facilities of the United States, and continues to coordinate with these agencies to address this issue. In addition, interstate natural gas companies are actively involved with several industry groups to chart how best to address security measures in the current environment. A Security Task Force has been created and is addressing ways to improve pipeline security practices, strengthen communication within the industry and the interface with government, and extend public outreach efforts.

Increased security awareness has occurred throughout the industry and the nation. The Office of Homeland Security was established with the mission of coordinating the efforts of all executive departments and agencies to detect, prepare for, prevent, protect against, respond to, and recover from terrorist attacks within the United States. The FERC, in cooperation with other Federal agencies and industry trade groups, has joined in the efforts to protect the energy infrastructure, including the approximately 300,000 miles of interstate natural gas transmission pipelines. The pipeline system would be inspected by air and on the ground in accordance with DOT surveillance requirements as discussed in Section 14.4.2. Security measures at the aboveground facilities would include secure fencing, locked buildings, security lighting, and automated alarm systems. Employees would be required to wear identification cards, and approved visitors would need to sign in and wear identification badges.

Safety and security are important considerations in any action undertaken by the FERC and the CSLC. The attacks of September 11, 2001 have changed the way pipeline operators as well as regulators must consider terrorism, both in approving new projects and in operating existing facilities. However, the likelihood of future attacks of terrorism or sabotage occurring along the proposed Project, or at any of the myriad of natural gas pipeline or energy facilities throughout the United States is unpredictable given the disparate motives and abilities of terrorist groups. The continuing need to construct facilities to support the future natural gas pipeline infrastructure is not diminished from the threat of any such future acts. Moreover, the unpredictable possibility of such acts does not support a finding that this particular Project should not be constructed.

4.14.6 No Project Alternative

Under the No Project Alternative, the FERC would deny North Baja's application for a Certificate and a Presidential Permit amendment, the CSLC would deny North Baja's application for an amendment to its right-of-way lease across California's Sovereign and School Lands, and the BLM would deny North Baja's application to amend its existing Right-of-Way Grant and obtain a Temporary Use

Permit for the portion of the Project on Federal lands. The No Project Alternative means that the Project would not go forward and the Project-related facilities would not be installed. Accordingly, none of the potential impacts on public safety identified for the construction and operation of the proposed Project would occur.

Because the proposed Project is privately funded, it is unknown whether North Baja would fund another energy project in California. However, should the No Project Alternative be selected, the energy needs identified in Section 1.1 would likely be addressed through other means, such as through other LNG or natural gas-related pipeline projects. Such projects may result in potential environmental impacts of the nature and magnitude of the proposed Project as well as impacts particular to their respective configurations and operations; however, these impacts cannot be predicted with any certainty at this time.